**Project ID: 18-0142** 

# Phase 1: Study of PFAS Compounds on the Chattooga River

Chattooga and Walker County, GA

Cherokee and Etowah County, AL

Project Date: April 24-25, 2018

Report Date: June 13, 2018

Project Leader: Derek Little, PE

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USEPA – Region 4
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The activities depicted in this report are accredited under the US EPA Region 4 Science and Ecosystem Support Division ISO/IEC 17025 accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation AT-1644.





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Stacey Box, Chief Ecology Section Field Services Branch

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#### 1.0 Introduction

Region 4 Water Protection Division (WPD) through the Drinking Water Section of the Grants and Drinking Water Protection Branch requested the assistance of the Science and Ecosystem Support Division (SESD) to determine background levels of per and polyfluoroalkyl substances or PFAS along the Chattooga River, Weiss Lake, and the Coosa River. PFAS are man-made chemicals that do not occur naturally in the environment and are persistent in the environment and the human body. Extensive information on PFAS can be found at <a href="https://www.epa.gov/pfas">https://www.epa.gov/pfas</a>. EPA has established a health advisory level of 70 parts per trillion or equivalently 70 ng/L for drinking water for Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonate (PFOS) combined, both a subset of PFAS. For this study PFAS will refer specifically to compounds analyzed by SESD Analytical Services Branch (ASB) listed in Table 1.

A total of sixteen surface water locations were sampled for this study on April 24<sup>th</sup> and April 25<sup>th</sup> of 2018; ten in the Chattooga River watershed, two at the outfall of Weiss Lake, one on Weiss Lake, and three on the Coosa River. At the request of the WPD, sampling was conducted under high flow conditions to capture any affects from land runoff.

None of the Chattooga River samples had detectable concentrations of PFOA. Four out of the ten Chattooga River watershed samples had detectable concentration of PFOS, with a mean concentration of 28 ng/L; CT01 at 20 ng/L, CT02 at 21 ng/L, CT03 at 26 ng/L, and CT06 at 83 ng/L.

The remaining six sites had a mean PFOS concentration of 56 ng/L, and all but CR02 had detectable concentrations of PFOA with a mean of 41 ng/L. Stations CT07 and CT10 were the only stations to have no detectable PFAS. Field and trip blanks had no detectable PFAS. A duplicate sample was collected at CT09, the only analyte that was detected was PFPeA and both results, 18 and 17 ng/L, were J,Q-2 flagged.

#### 2.0 Study Area and Sampling Plan

The Chattooga River originates in Walker County Georgia and feeds into Weiss Lake near Gaylesville, Alabama. Weiss Lake is an impoundment of the Coosa River discharging into the Coosa River in Leesburg, Alabama. The Oostanaula River, a tributary to the Coosa, has historically tested positive for the presence of PFAS.

The Chattooga sampling sites began in Gaylesville, AL and ended upstream La Fayette, GA. Two of the Coosa River sample locations coincided with regularly sample sites by Alabama Department of Environmental Management (ADEM) downstream of Weiss Lake. A third Coosa River sample was collected upstream of Weiss Lake in Georgia. Sampling activities were conducted in accordance with methods outlined in Phase 1: Study of PFAS Compounds on the Chattooga River Sample and Analysis Plan (SESDSAP-180142, 2018). Detailed locations and descriptions of the sample sites are provided in Table 2. A conceptual flow model for the Chattooga River samples is provided in Figure 1.

#### 3.0 Field Methods

Grab samples were collected at each site and were analyzed by ASB for PFAS listed in Table 1. A two-person clean hands/dirty hands protocol was used. One member of the sampling team was designated clean hands and another as dirty hands. All operations involving contact with the sample container and sample media was conducted by the clean hands team member. All other preparations for sampling was performed by the dirty hands team member. At each station, two 15 ml extraction vials were filled to

approximately 5 ml. Samples were collected facing upstream for wadeable locations and upwind of the motor for the boating location. The clean hands member opened the vial 3 to 6 inches underwater to collect the sample. If overfilled, the sample was decanted to 5 ml. Samples were double bagged with Whirl-paks® and placed on ice.

After the sample collection at a station, *in situ* measurements of dissolved oxygen, pH, specific conductivity, and temperature were collected via a multiparameter data sonde. Turbidity was measured on a grab sample using a LaMotte portable turbidimeter. Sample locations were measured with a handheld GPS. Upstream and downstream pictures were also taken at each location where applicable. No flow measurements were possible due to high flows from recent rains. Standard operating procedures utilized are summarized in Table 3. Trip blanks, field blanks, and a duplicate were utilized for quality assurance purposes.

During sampling at station CT06, a pipe was observed actively discharging into the Chattooga River (Figure 26). The pipe, located on the southern side of the river, is most likely for storm drainage.

#### 4.0 Results

All samples were analyzed by ASB using ASBPROC-800-R0, *Determination of Per- and Polyfluoroalkyl Substances in Water, Influent, Effluent and Wastewater by Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS)*.

PFOS was detected at sites CI00, GI00, CR01, CR02, CT01, CT02, CT03, CT06, OF01, and OF02. PFOA was detected at sites CR01, CI00, GI00, OF01, and OF02. Combined PFOA and PFOS concentrations were above the health advisory of 70 ppt at stations CI00, CR01, CT06, OF01, and OF02. Station GI00 total concentration of PFOA and PFOS was below the advisory at 64 ppt. The greatest total PFOA and PFOS concentrations was seen at CR01, 156 ng/L. PFOS and PFOA results are summarized in Table 5. Additionally, Figure 2 through Figure 4 provide maps of stations with PFOA and PFOS concentrations.

The U qualifier on the tables and maps denotes that the analyte was not detected at or above the reporting limit. The J qualifier in the results tables denotes the identification of the analyte is acceptable; the reported value is an estimate. An accompanying Q-2 qualifier denotes that the result was greater than MDL but less than MRL, hence the estimate qualification.

Concentrations of other PFAS compounds are summarized in Table 6 through Table 11. No PFAS compounds were detected at CT07 or CT10. No PFAS compounds were detected in field or trip blanks. FB2 was misclassified as an air blank within Scribe but is a water field blank. Sample CT09-D was a duplicate sample of CT09. Perfluoropentanoic acid (PFPeA) was the only PFAS analyte detected in samples CT09 and CT09-D at an estimated 18 ng/L and 17 ng/L, respectively.

Field in situ measurements are summarized in Table 4 along with sample dates and times.

#### 5.0 Discussion and Recommendations

Within the Chattooga watershed, no PFOA was detected during sampling. PFOS was detected at three of the Chattooga watershed sample locations with the furthest upstream at CT06. PFOS was not detected downstream from CT06 until CT03. Dilution from high flows may have resulted in non-detects of PFOA and PFOS at CT04 and CT05.

Further clarification of PFOS sources in the Chattooga watershed would be informed by a low flow sampling with additional sample locations between CT03 and CT06 on the mainstem of the Chattooga River and its tributaries. Tributaries of interest include Chappell Creek near CT06 and Taliaferro Creek between CT03 and CT04. Additionally, if the pipe at CT06 is discharging under dry conditions, sampling would be warranted.

#### 6.0 References

SESDSAP-180142. (2018). 18-0142 Phase 1: Study of PFASs Compounds on the Chattooga River. Athens, GA: U.S. EPA Region 4.

# 7.0 Tables

Table 1: PFAS Analytes

Analyte Name	CASRN	Acronym
Perfluorotridecanoic acid	72629-94-8	PFTrA
Perfluorododecanoic acid	307-55-1	PFDoA
Perfluoroundecanoic acid	2058-94-8	PFUdA
Perfluorodecanoic acid	335-76-2	PFDA
Perfluorononanoic acid	375-95-1	PFNA
Perfluorooctanoic acid	335-67-1	PFOA
Perfluoroheptanoic acid	375-85-9	PFHpA
Perfluorohexanoic acid	307-24-4	PFHxA
Perfluoropentanoic acid	2706-90-3	PFPeA
Perfluorobutyric acid	375-22-4	PFBA
Perfluorodecanesulfonate	335-77-3	PFDS
Perfluorononanesulfonate	68259-12-1	PFNS
Perfluorooctanesulfonate	1763-23-1	PFOS
Perfluoroheptanesulfonate	375-92-8	PFHpS
Perfluorohexanesulfonate	355-46-4	PFHxS
Perfluoropentansulfonate	2706-91-4	PFPeS
Perfluorobutanesulfonate	375-73-5	PFBS
Perfluorooctanesulfonamide	754-91-6	FOSA
Fluorotelomer sulfonate 8:2	39108-34-4	8:2FTS
Fluorotelomer sulfonate 6:2	27619-97-2	6:2FTS
Fluorotelomer sulfonate 4:2	757124-72-4	4:2FTS
N-(Heptadecafluorooctylsulfonyl)-N-methylglycine	2355-31-9	N-MeFOSAA
Propanoic acid, 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-	13252-13-6	HFPO-DA

Table 2: Sample Locations

	Ctation ID	Dagarintian	Ctoto	1	
	Station ID	Description	State	Latitude	Longitude
1	CI00	Weiss Lake	AL	Redacted	
2	CR01	Coosa Sample	GA		
3	CR02	NEE-13, Coosa River	AL		
4	CT01	Canyon Road	AL		
5	CT02	Cherokee County 97	AL		
6	CT03	Holland Chattoogaville	GA		
7	CT04	Lyerly Dam	GA		
8	CT05	USGS Station, GA-1	GA		
9	CT06	Martha Berry	GA		
10	CT07	Club Drive	GA		
11	CT08	Tate Rd	GA		
12	CT09	Shattuck Blvd	GA		
13	CT10	W Villanow St	GA		
14	GI00	Gadsden	AL	Redacted	
15	OF01	Outfall 1	AL		
16	OF02	Power Outfall	AL		

Table 3: Standard Operating Procedures Utilized

Field Measurement Procedures	SESDPROC-	Revision
Field pH Measurement	100	R4
Field Specific Conductance Measurement	101	R6
Field Temperature Measurement	102	R5
Field Turbidity Measurement	103	R4
Field Measurement of Dissolved Oxygen	106	R4
Global Positioning System	110	R4
In-Situ Water Quality Monitoring	111	R3
Field Sampling Procedures	SESDPROC-	Revision
Surface Water Sampling	201	R4
Divisional Quality Systems Documents	SESDPROC-	Revision
Logbooks	1002	R0
Quality System Procedures	SESDPROC-	Revision
Sample and Evidence Management	005	R3
Field Sampling Quality Control	011	R5

Table 4: in situ Measurements

			Dissolved			Specific	
			Oxygen	рН	Temperature	Conductivity	Turbidity
Station	Date	Time	(mg/L)		(°C)	(μS/cm)	(NTU)
GI00	4/24/2018	12:40	8.60	6.97	17.70	151.0	10.0
CR02	4/24/2018	13:20	8.91	7.67	17.54	149.5	13.0
OF02	4/24/2018	14:15	8.95	7.86	17.76	151.0	11.0
OF01	4/24/2018	14:40	9.76	8.03	18.50	152.0	19.0
CI00	4/24/2018	15:15	9.56	8.14	18.23	155.0	7.8
CT01	4/24/2018	16:05	8.62	7.95	15.80	132.0	58.1
CT02	4/24/2018	16:30	8.97	7.84	15.57	124.5	70.1
CT03	4/25/2018	09:30	8.59	7.70	15.70	141.0	36.0
CT04	4/25/2018	09:55	9.01	7.82	15.61	149.4	27.0
CT05	4/25/2018	10:20	9.36	7.80	15.48	151.0	22.0
CT06	4/25/2018	10:45	8.77	7.85	15.30	183.0	15.0
CT07	4/25/2018	11:10	9.26	8.07	15.07	115.2	15.0
CT08	4/25/2018	11:30	9.07	8.16	15.30	126.8	23.0
CT09	4/25/2018	12:00	8.85	7.85	16.87	171.8	15.0
CT10	4/25/2018	12:15	8.80	7.94	15.53	230.8	6.6
CR01	4/25/2018	13:30	8.10	7.93	16.09	105.0	55.0

Table 5: PFOA and PFAS Results

(ng/	(L) GIO	C100	CR02	OF01	OF02	CT01	CT02	CT03	CT06	CR01
PFC	DA 32	40	U	38 <sup>†</sup>	35 <sup>†</sup>	U	U	U	U	61
PF	OS 32	<sup>†</sup> 37 <sup>†</sup>	46	55	73	20 <sup>†</sup>	21 <sup>†</sup>	26 <sup>†</sup>	83	95
Total	al: 64	77	46	93	108	20	21	26	83	156

<sup>&</sup>lt;sup>†</sup>Result qualifier of J The identification of the analyte is acceptable; the reported value is an estimate and Q-2 Result greater than MDL but less than MRL.

Table 6: PFBA Results (ng/L)

Station	Result	Qualifier	Reporting Limit
CI00	18	J,Q-2	41
GI00	19	J,Q-2	41
OF02	20	J,Q-2	42
CT03	18	J,Q-2	39
CT04	18	J,Q-2	38
CT05	20	J,Q-2	38
CT08	18	J,Q-2	39
CR01	25	J,Q-2	41

Average 20

Table 7: PFBS Results (ng/L)

Station	Result	Q	Reporting Limit
Cl00	130		41
GI00	120		41
OF01	110		41
OF02	120		42
CR02	120		38
CT01	27	J,Q-2	39
CT02	23	J,Q-2	41
CT03	29	J,Q-2	39
CT04	22	J,Q-2	38
CT05	22	J,Q-2	38
CT08	28	J,Q-2	39
CR01	210		41

Average 80

Table 8: PFDA Results (ng/L)

Station	Result	Q	Reporting Limit
OF02	43	J.Q-2.QS-3	83

Table 9: PFHpA Results (ng/L)

Station	Result	Q	Reporting Limit
GI00	16	J,Q-2	41
C100	21	J,Q-2	41
CR02	17	J,Q-2	38
OF01	19	J,Q-2	41
OF02	20	J,Q-2	42
CT03	15	J,Q-2	39
CT04	20	J,Q-2	38
CT05	18	J,Q-2	38
CR01	20	J,Q-2	41

Average 18

Table 10: PFHxA Results (ng/L)

Station	Result	Q	Reporting Limit
GI00	51		41
CI00	33	J,Q-2	41
CR02	47		38
OF01	42		41
OF02	47		42
CT01	100		39
CT02	68		41
CT03	91		39
CT04	66		38
CT05	78		38
CT08	63		39
CR01	59		41

Average 62

Table 11: PFPeA Results (ng/L)

Station	Result	Q	Reporting Limit
GI00	68		41
CI00	71		41
CR02	72		38
OF01	70		41
OF02	75		42
CT01	130		39
CT02	120		41
CT03	110		39
CT04	160		38
CT05	170		38
CT06	30	J,Q-2	41
CT08	130		39
CT09	18	J,Q-2	39
CT09	17	J,Q-2	39
CR01	80		41

Average 88

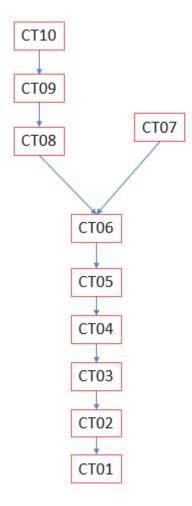


Figure 1: Chattooga Stations Conceptual Flow Model

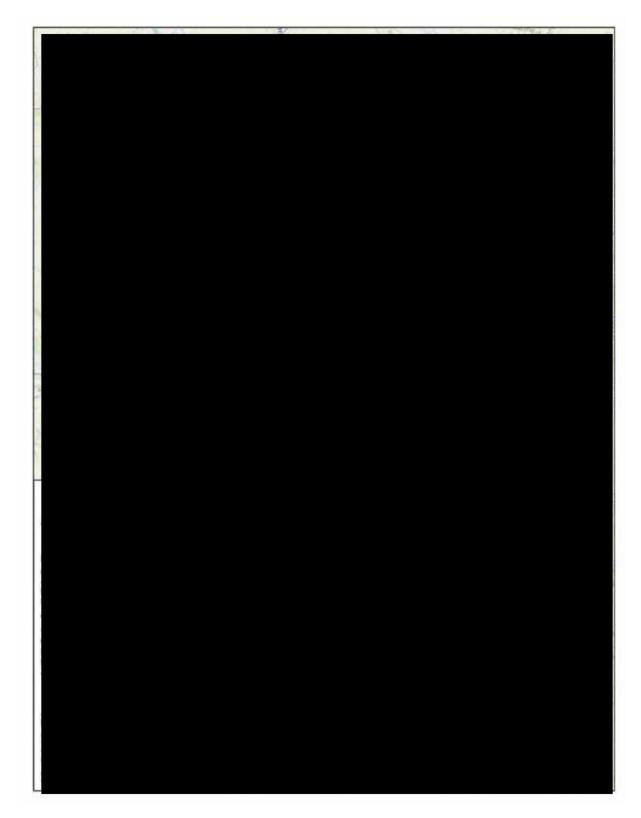


Figure 2: PFOA & PFOS Sample Results



Figure 3: Chattooga Watershed PFOA & PFOS Results

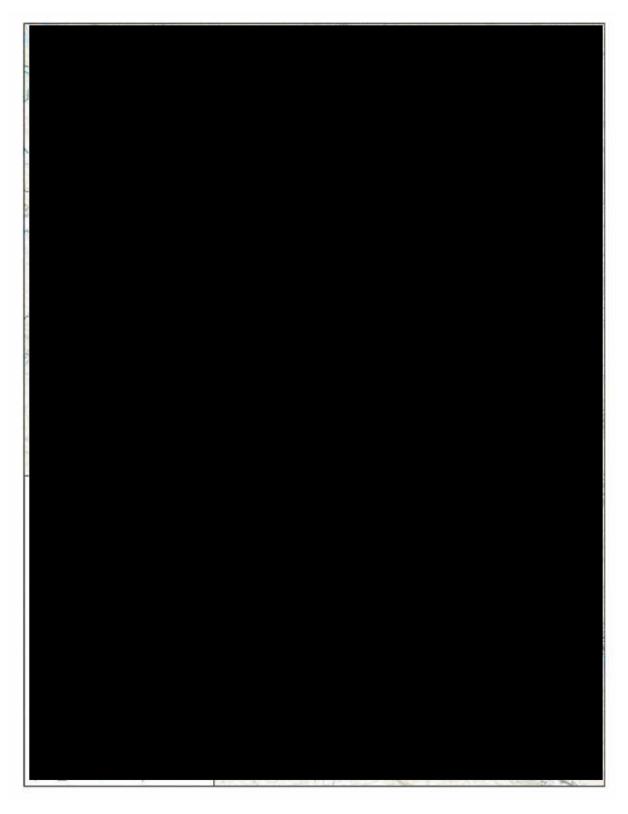


Figure 4: Weiss Lake and Coosa River PFOA & PFOS Results

# 9.0 Pictures

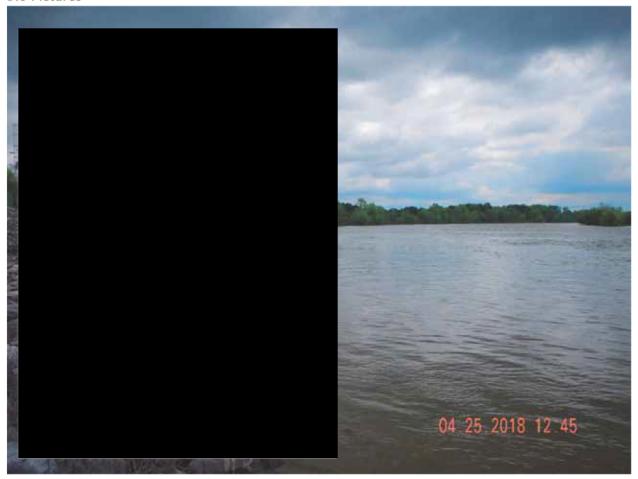


Figure 5: GI00 Upstream View

Note: Camera dates on photos are one day ahead.



Figure 6: GI00 Downstream View



Figure 7: CR02 Upstream View



Figure 8: CR02 Downstream View



Figure 9: OF02 Upstream View



Figure 10: OF02 Downstream View

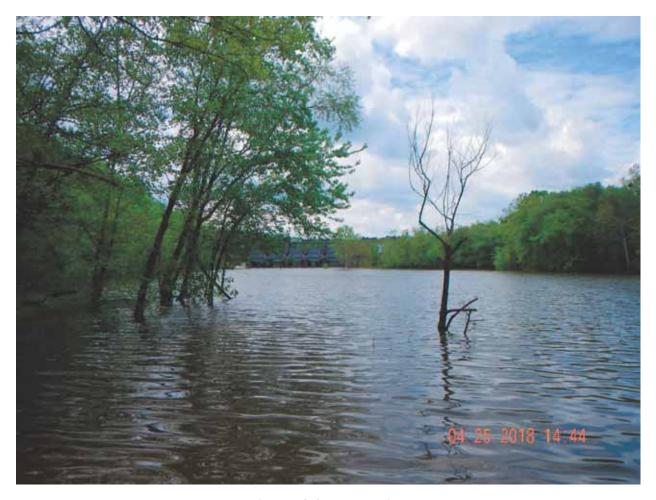


Figure 11:OF01 Upstream View



Figure 12: OF01 Downstream View



Figure 13: CIOO Lake View



Figure 14: CT01 Upstream View



Figure 15: CT01 Downstream View

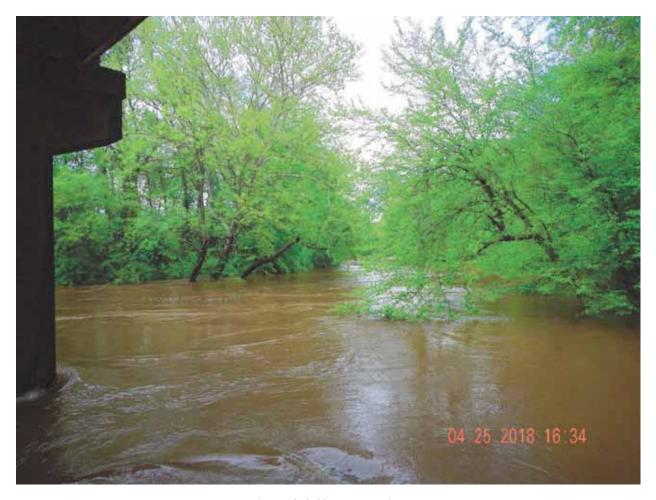


Figure 16: CT02 Upstream View



Figure 17: CT02 Downstream View



Figure 18: CT03 Upstream View



Figure 19: CT03 Downstream View



Figure 20: CT04 Upstream View

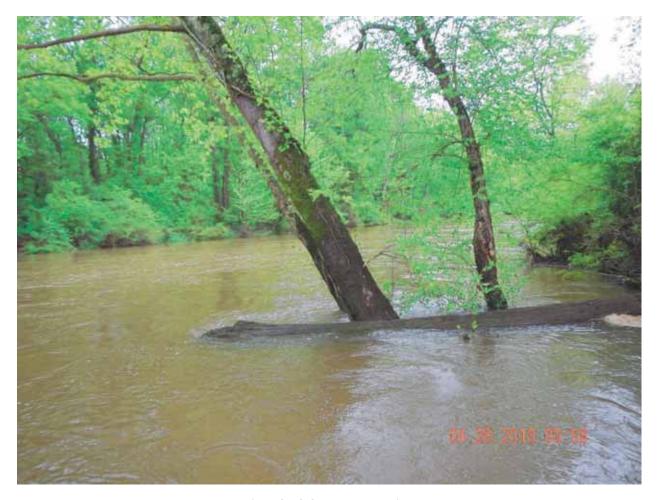


Figure 21: CT04 Downstream View



Figure 22: CT05 Upstream View



Figure 23: CT05 Downstream View

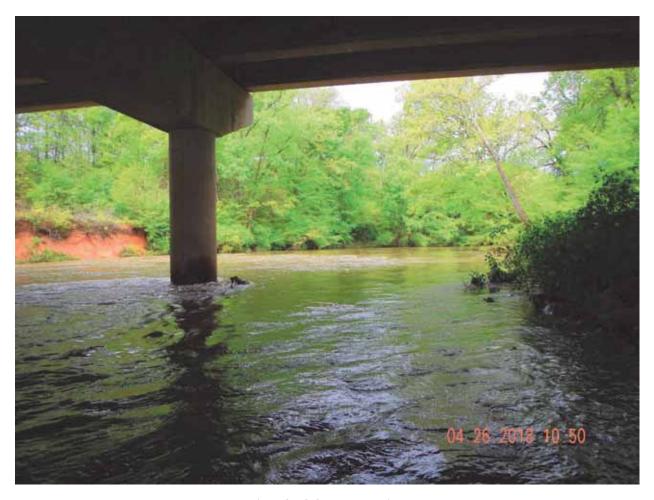


Figure 24: CT05 Upstream View

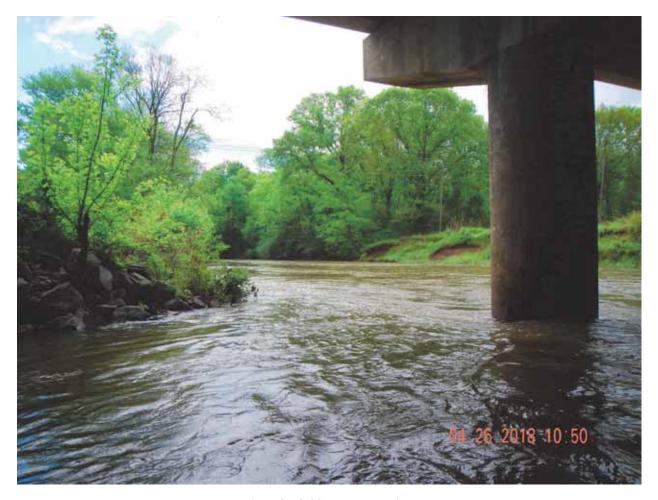


Figure 25: CT06 Downstream View



Figure 26: CT06 Unknown Pipe



Figure 27: CT07 Upstream View

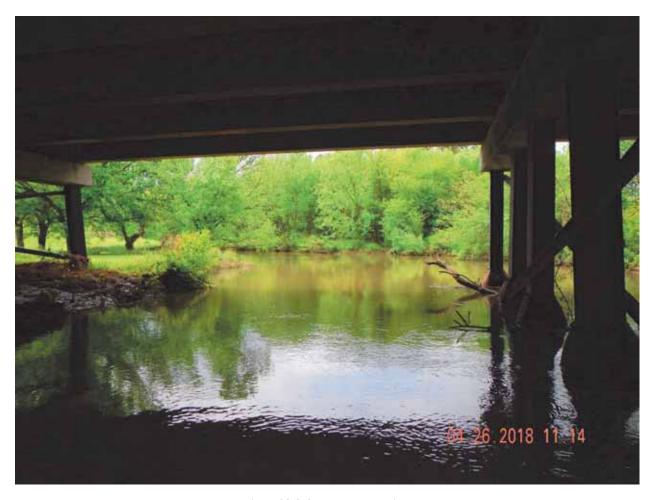


Figure 28:CT07 Downstream View

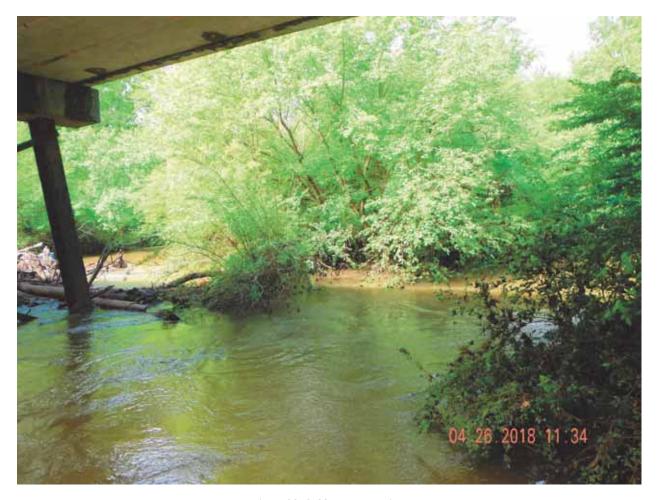


Figure 29: CT08 Upstream View

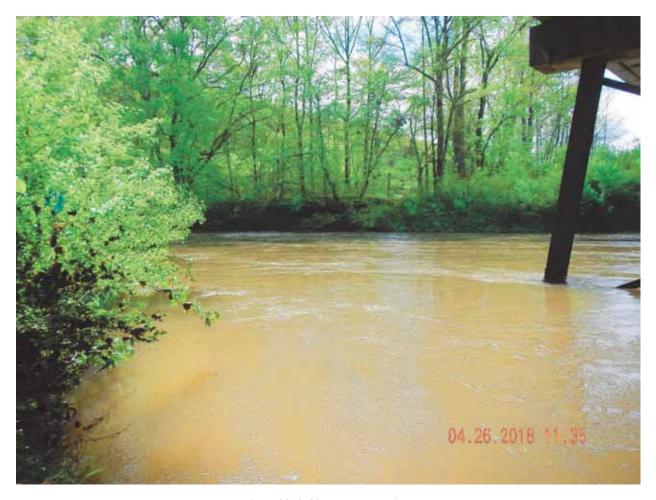


Figure 30: CT08 Downstream View

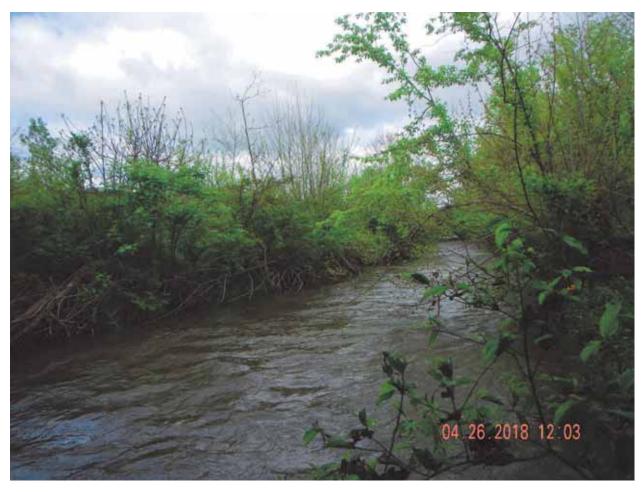


Figure 31: CT09 Upstream View

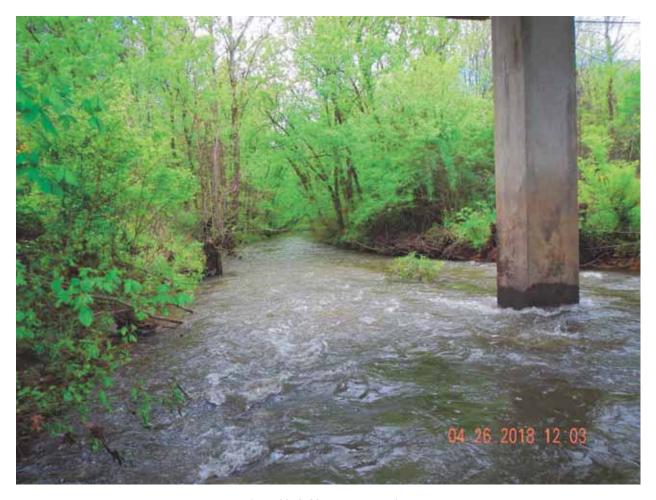


Figure 32: CT09 Downstream View

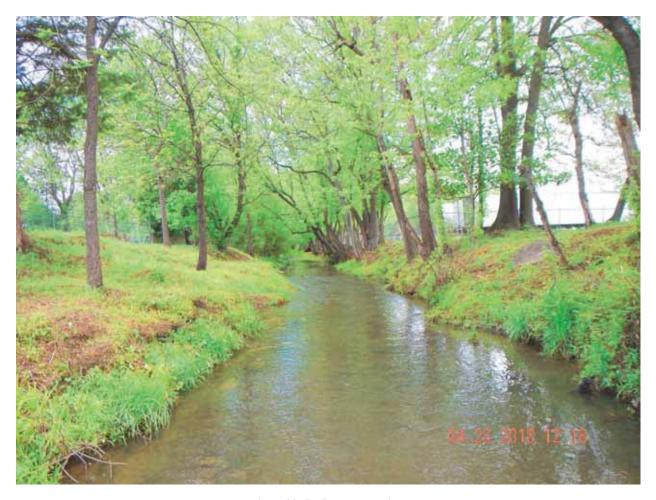


Figure 33: CT10 Upstream View



Figure 34: CT10 Downstream View

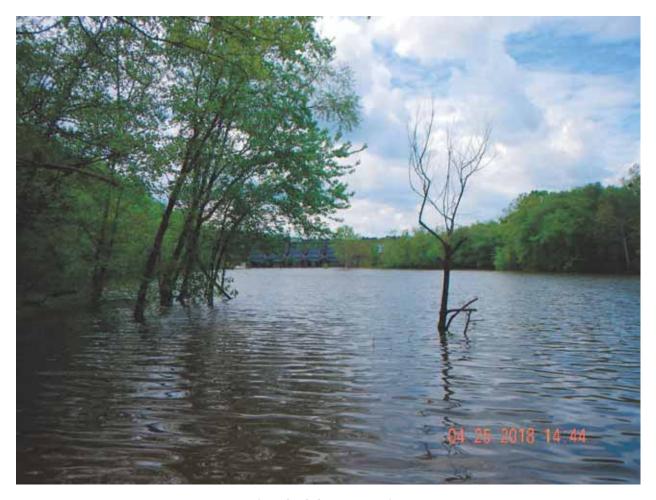


Figure 35: CR01 Upstream View



Figure 36: CR01 Downstream View



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

May 29, 2018

4SESD-ASB

### MEMORANDUM

SUBJECT: FINAL Analytical Report

Project: 18-0142, Phase 1 PFASs Chattooga River

Surface Water Protection

FROM: Diana Burdette

OCS Analyst

THRU: Floyd Wellborn, Chief

ASB Organic Chemistry Section

TO: Derek Little

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and have been qualified by this laboratory if the applicable quality control criteria were not met. Verification is defined in Section 5.2 of the ASB LOQAM. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report: Method Used: Accreditations:

Semi Volatile Organics (SVOA)

PFAS ASB 100S (Water)

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. 14: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

## Sample Disposal Policy

Due to limited space for long term sample storage, ASB's policy is to dispose of samples on a periodic schedule. Air samples collected in summa canisters will be disposed of 30 days following the issuance of this report. All other sample media including original samples, sample extracts and or digestates will be disposed of, in accordance with applicable regulations, 60 days from the date of this report.

This sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that ease development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time. If samples require storage beyond the 60-day period, please contact the Sample Control Coordinator by e-mail at R4SampleCustody@epa.gov.

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Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

## SAMPLES INCLUDED IN THIS REPORT

### Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID	Laboratory ID	Matrix	<b>Date Collected</b>	Date Received
0418-FB1	E181703-01	Field Blank	4/24/18 15:10	4/26/18 8:45
0418-FB2	E181703-02	Field Blank Air	4/25/18 10:15	4/26/18 8:45
QA-TB	E181703-03	Trip Blank - Water	4/18/18 15:00	4/26/18 8:45
C106-0418	E181703-04	Surface Water	4/24/18 15:15	4/26/18 8:45
CR01-0418	E181703-05	Surface Water	4/25/18 13:30	4/26/18 8:45
CR02-0418	E181703-06	Surface Water	4/24/18 13:20	4/26/18 8:45
CT01-0418	E181703-07	Surface Water	4/24/18 16:05	4/26/18 8:45
CT02-0418	E181703-08	Surface Water	4/24/18 16:30	4/26/18 8:45
CT03-0418	E181703-09	Surface Water	4/25/18 09:30	4/26/18 8:45
CT04-0418	E181703-10	Surface Water	4/25/18 09:55	4/26/18 8:45
CT05-0418	E181703-11	Surface Water	4/25/18 10:20	4/26/18 8:45
CT06-0418	E181703-12	Surface Water	4/25/18 10:45	4/26/18 8:45
CT07-0418	E181703-13	Surface Water	4/25/18 11:10	4/26/18 8:45
CT08-0418	E181703-14	Surface Water	4/25/18 11:30	4/26/18 8:45
CT09-0418	E181703-15	Surface Water	4/25/18 12:00	4/26/18 8:45
CT09-0418-D	E181703-16	Surface Water	4/25/18 12:05	4/26/18 8:45
CT10-0418	E181703-17	Surface Water	4/25/18 12:15	4/26/18 8:45
G100-0418	E181703-18	Surface Water	4/24/18 12:40	4/26/18 8:45
OF01-0418	E181703-19	Surface Water	4/24/18 14:40	4/26/18 8:45
OF02-0418	E181703-20	Surface Water	4/24/18 14:15	4/26/18 8:45

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

### DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
H-6	Sample originally analyzed within holding time; some QC requirements not met. The reported result is from a second analysis performed for confirmation which occurred after the holding time expired.
J	The identification of the analyte is acceptable; the reported value is an estimate.
Q-2	Result greater than MDL but less than MRL.
OC-5	Calibration check standard less than method control limits.
QL-1	Laboratory Control Spike Recovery less than method control limits
QM-3	Matrix Spike Precision outside method control limits
QS-3	Surrogate recovery is lower than established control limits.

## ACRONYMS AND ABBREVIATIONS

CAS	Chemical Abstracts Service
	Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov.srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
MDL	Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
MRL	Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
TIC	Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass

## ACCREDITATIONS:

estimated concentration reported.

ISO ASB is accredited by ISO/IEC 17025, including an amplification for forensic accreditation through ANSI-ASQ National Accreditation Board.

spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the

Refer to the certificate and scope of accreditation AT-1644 at: http://www.epa.gov/aboutepa/about-region-4s-science-and-ecosystem-support-division-sesd

NR The EPA Region 4 Laboratory has not requested accreditation for this test.

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: 0418-FB1 Lab ID: E181703-01
Station ID: Matrix: Field Blank

Date Collected: 4/24/18 15:10

CAS Number	(America)	Smith Qualifier	Date	1000	Property	Sales	Same:
757124-72-4	4:2FT8	40 U	ng L	40	8-00-16 -0-16	3/15/18 23/23	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/09/18 9:18	5/15/16 23:23	ASB 1008
39108-34-4	8:2FTS	40 U	ng L	40	9.00 TS 9.38	N15/18 29:23	ASB 1005
754-91-6	FOSA	40 U	ng/L	40	5/09/18 9:18	3/13/18 - 23/23	ASB 1005
13252-13-6	HFFO-DA	40 U	ng L	40	3/00/18 9:18	3/15/16	AND 1006
2355-31-9	N-MeFOSAA	40 Ú	ng L	40	5/09/18 9/18	5/15/18 23/23	ASB 1005
375-22-4	PFRA	40 😃	ngL	40	9.18	23 23	ASB 1008
375-73-5	PFBS	40 U	ng L	40	3/09/16 9:18	3/15/18 23/23	ASB 1005
335-76-2	PFDA	80 U	ng L	80	900018 018	23 23	A33 1005
107-55-1	PFDoA	40 U, J, H-6, QL-1	ng L	40	5/09/18 9:18	5/25/18 +33	ASB 1005
335-77-3	PFDS	160 U	ng/L	160	3.09/18 E.18	5/15/18 23/23	ASS 1005
375-85-9	PFHpA	40 U	ng L	40	5/09/18 9:18	3/15/16	ASB 1005
375-92-8	PFHpS	40 U	ng/L	40	5/00/18 9:78	23-23	A20 1005
107-24-4	PFHxA	40 U	ng/L	40	5/00/18 9:18	5/15/16 23:23	ASB 1005
155-46-4	PFHsS	40 U	ng L	:40	A0918 #38	5/15/16 23/23	AEB 1005
375-95-1	PFNA	40 U	ng L	40	5/09/18 9:18	3/15/18 23/23	ASB 1005
58259-12-1	PFNS:	-40 U	ng L	40	3/00/16 F 18	3/15/18	ASB 1005
335-67-1	PFOA	40 U	ng L	40	5/09/18 - 9:18	5/15/18 23:23	A5B 1005
1763-23-1	PFOS:	40 LL	ng L	40	2.09/18 9/19	5/15/18 23:23	ATR 1005
2706-90-3	PFPeA	40 U	ng L	40	5/09/18 9:18	3/13/18 23/23	A5B 1005
2706-91-4	PFPeS	40 U	ng L	40	9.090 18 9.16	\$15/18 23:23	ASB 1008
72629-94-8	PFTrDA	160 U. J. QC-5, H-6	ng L	160	3/09/18 9:18	5/25/18 4.33	A5B 1005
1058-94-8	PFUdA	40 17	ng:L	40	3/09/18	3/13/18	ASB 1008

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. ld; 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: 0418-FB2 Lab ID: E181703-02
Station ID: Matrix: Field Blank Air

Date Collected: 4/25/18 10:15

CAS Number	(American)	Smith Qualifiers	Limite	1000	Proposed	interi	distant.
757124-72-4	4:2FT8	41/0	ng L	315	1-09/16 9-16	3/15/18 - 23-40	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/09/18 9:18	5/15/18 23:46	ASB 1008
19108-34-4	8:2FTS	41 U.J. Q8-3	ng L	41	9.00 TS	5/15/19 23/46	A3B 1005
754-91-6	FOSA	41 U	ng/L	41	5/09/18 9:18	3/13/18	ASB 1005
13252-13-6	HFFO-DA	41 U	ng L	41	3/00/18 9:18	3/15/18	ASD 1006
1355-31-9	N-MeFOSAA	41 U	ng L	41	5/09/18 9/18	5/15/18 23:40	ASB 1005
375-22-4	PFBA	41 <u>U</u>	ng L	41	9.18	23.46	ASB 1008
375-73-5	PFBS	41 U	ng L	41	3/09/16 9:18	5/15/18 23:46	ASB 1005
335-76-2	PFDA	82 U	ng L	82	90001H	23.66	A33 1005
307-55-1	PFDoA	41 U, J, H-6, QL-1	ng L	41	5/09/18 9:18	9/25/18 4:55	A3B 1005
335-77-3	PFDS	160 U	ng/L	160	3,09/18 #18	5/15/18 23.46	ASS 1005
375-85-9	PFHpA	41 U	ng/L	41	5/09/18 11/8	3/15/18 23:46	ASB 1005
375-92-8	PFHpS	41 U	ng/L	41	5/00/18	23:15/16 -	A20 1005
107-24-4	PFHxA	41 U	ng/L	41	5/09/18 9:18	5/15/18 23.46	ASB 1005
155-46-4	PFHsS	41 U	ng L	-41	A0918 #38	5/15/16 23:46	AEB 1005
375-95-1	PFNA	41 U	ng/L	41	5/09/18 9:18	3/15/18 23:46	ASB 1005
58259-12-1	PFNS	41 U	ng L	-41	3/66/16. F18	3/15/18 23.46	ASB 1005
335-67-1	PFOA	41 U	ng L	41	5/09/18 -9:18	3/15/18 23:46	ASB 1005
1763-23-1	PFOS:	4) 0	ng L	41	2.09/18 9:19	S15/18 23.46	AIB 1005
2706-90-3	PFPeA	41 U	ng L	41	5/09/18 9:18	5/15/18 23:46	A5B 1005
2706-91-4	PFPeS	41 U	ng L	41	5.590/18 # 16	9/15/18 23.46	ASB 1005
72629-94-8	PFTrDA	160 U, J, H-6, QC-5	ng L	160	3/09/18 9/18	5/25/18 4.55	A5B 1005
1058-94-8	PFUdA	41 17	ng:L	41	2/09/18	37378	ASB 1008

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: C100-0418
 Lab ID: E181703-04

 Station ID: C100
 Matrix: Surface Water

Date Collected: 4/24/18 15:15

CAS Number	(Amage)	Small Confiden	Units	1000	Proposed	Sector	Same:
757124-72-4	4:2FT8	41 U	ngT.	315	1.09 TE	87678 931	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/09/18 9:18	5/16/18 0:31	ASB 1008
39108-34-4	8:2FTS	41 🗓	ng/L	41	9.00 18 9.38	U16/18 = 37	A3B 1006
754-91-6	FOSA	41 U	ng/L	41	5/09/18 9:18	3/16/18 0/31	ASB 100S
13252-13-6	HFFO-DA	41 U	ng L	41	3/00/18 9:18	3/16/18	ASD 1006.
2355-31-9	N-MeFOSAA	41 U	ng L	41	5/09/18 9-18	9/36/18 0:37	ASB 1005
375-22-4	PFBA	18 J. Q-2	ngL	41	9.18	51618 931	ASB 1008
375-73-5	PFBS	130	ng L	41	5/09/16 9:18	3/16/18 0.31	ASB 1005
335-76-2	PFDA	81 U	ng L	81	9700-18 = 18	5/16/18 0.31	A3B 1008
307-55-1	PFDoA	41 U, J, H-6, QL-1	ng L	41	5/09/18 9:18	5/25/18 5:41	A3B 1005
335-77-3	PFDS	160 U	ng/L	160	3,0978 F.18	5/16/18 H.31	ASR 1005
375-85-9	PFHpA	21 J.Q-2	ng L	41	5/09/18 11.18	3/16/18	ASB 1005
375-92-8	PFHp8	41 U	ng/L	-41	5/00/18 9 78	57678	A20 1005
307-24-4	PFHxA	33 J.Q-2	ng/L	41	5/00/18 9:18	5/16/18 0.31	ASB 1005
355-46-4	PFHsS	41 U	ng L	-41	A09/16 + 18.	93678	AEB 1005
375-95-1	PFNA	41 U	ng L	41	5/09/18 9:18	3/16/18 0:31	ASB 1005
68259-12-1	PFNS:	41 U	ng L	41	3/66/16 F 18	376-18	ASB 1005
335-67-1	PFOA	40 J, Q-2	ng L	41	5/09/18 9:18	3/16/18	ASB 1005
1763-23-1	PFOS	37 J, Q-2	ng L	41	2.09/18 9:19	57678 031	ATB 1005
2706-90-3	PFPeA	71	ng L	41	5/09/18 9:18	3/16/18 0:31	ASB 1005
2706-91-4	PFPeS	41.0	ng L	41	9.090-18 # 16	53638 0.31	A3B 1008
72629-94-8	PFTrDA	160 U, J, H-6, QC-5	ng L	160	509/18 9/18	5/25/18 5.41	ASB 1005
2058-94-8	PFUdA	41 U	ng:L	41	3/09/18	3/16/18	ASB 1008

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. ld; 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CR01-0418 Lab ID: E181703-05
Station ID: CR01 Matrix: Surface Water

Date Collected: 4/25/18 13:30

CASE Number	(American)	Smith Confiden	Daile	1000	Proposal	Sales	distant.
757124-72-4	4:2FT8	41.0	ngT.	315	8-00-TE	\$1618 933	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/00/18 9:18	5/16/18 0.33	ASB 1008
19108-34-4	8:2FTS	41 U	ng L	41	9.00 TS	276 IS	A3B 1005
754-91-6	FOSA	41 U	ng/L	41	5-09/18 9:18	3/16/18	ASB 1005
13252-13-6	HFFO-DA	41 U	ng L	41	N09-18	3/16/18	ASD 1006.
1355-31-9	N-MeFOSAA	41 U	ng L	41	5/09/18 9/18	3/16/18 0.53	ASB 1005
975-22-4	PFBA	25 1,0-2	ngL	41	9:18	51618	ASB 1008
375-73-5	PFBS	210	ng L	41	3/09/16 9.18	5/16/18 0.53	ASB 1005
335-76-2	PFDA	82 U	ng L	82	9709/18 9/18	3/16/18 9:33	ASS 1005
307-55-1	PFDoA	41 U, J, H-6, QL-1	ng L	41	5/09/18 9:18	5/25/18 ±:03	A3B 1005
335-77-3	PFDS	160 U	ng/L	160	509518 E.10	5/16/18 II 53	ASR 1005
375-85-9	PFHpA	20 J, Q-2	ng L	41	5/09/18 9:38	3/16/18	ASB 1005
375-92-8	PFHpS	41 U	ng/L	-41	5/00/18 9:78	57678	A20 1005
107-24-4	PFHxA	59	ng/L	41	5/00/18 9:18	5/16/18 0.53	ASB 1005
155-46-4	PFHsS	41 U	ng L	-41	A0918 #38	91616	AEB 1005
375-95-1	PFNA	41 U	ng1.	41	5/09/18 9:18	3/16/18 0/13	ASB 1005
58259-12-1	PFNS:	41 B	ng L	41	3/00/16	3/16-JR	ASB 1005
335-67-1	PFOA	61	ng L	41	5/09/18 9:18	2/16/18	ASB 1008
1763-23-1	PFOS:	95	ng L	41	2.09/18 9.18	5/16/18 0:53	ATR 1005
2706-90-3	PFPeA	80	ng L	41	5/09/18 9:18	5/16/18 0:53	A5B 1005
2706-91-4	PFPeS	41.0	ng L	311	9.090 18 9.10	1/16/18 0.53	ASB 1005
72629-94-8	PFTrDA	160 U. J. H-6, QC-5	ng L	160	3/09/18 9/18	575/18 6-03	A5B 1005
1058-94-8	PFUdA	41 U	ng:L	41	200/18 9/18	3/16/19	ASB 1005

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: <u>CR02-0418</u>
 Lab ID: <u>E181703-06</u>

 Station ID: <u>CR02</u>
 Matrix: Surface Water

Date Collected: 4/24/18 13:20

	(Amagen)		Davis		Proposed	interest	Annage .
757124-72-4	42FT8	38 U	ngT.	38	8-90-18 -0-18	\$1618 136	A88 1005
27619-97-2	6:2FTS	150 U	ng L	150	5/00/18 9:18	5/16/16 1:16	ASB 1008
39108-34-4	82FTS	38 U	ng L	38	9.18 9.18	5/16/18 7/16	ASB 1006
754-91-6	FOSA	38 U	ngT.	38	5/09/18 9:18	3/16/18	ASB 1005
13252-13-6	HDTO-DA	38 U	ng L	38	3/00/18 9:18	376/8	AED 1006
2355-31-9	N-MeFOSAA	38 U	ng L	38	5/09/18 9/18	9/16/18 1.10	ASB 1005
375-22-4	PFRA	38 U	ngL	38	9.18	37618	ASB 1008
375-73-5	PFBS	120	ng L	38	5/09/16 9:18	31618 136	ASB 1005
335-76-2	PFDA	77 U	ng L	77	9700-18 0-18	3/16/18	A33 1008
307-55-1	PFDoA	38 U, J, QL-1	ng L	38	5/09/18 9:18	5/16/18 1/16	A3B 1005
335-77-3	PFDS	150 U	ng/L	150	509578 #38	3/16/18	ASR 1005
375-85-9	PFHpA	17 J, Q-2	ng L	38	5/09/18 11.18	3/16/18	ASB 1005
375-92-8	PFHpS	.38 U	ng/L	38	5/00/18 9.78	27618 - 2.10	A211 1005
307-24-4	PFHxA	47	ng/L	38	5/00/18 9:18	9/16/18 1:18	ASB 1005
355-46-4	PFHsS	38 U	ng L	38	A09/18 #38	3/16/18	AEB 1005
375-95-1	PFNA	38 U	ng1.	38	5/09/18 9:18	33618 136	ASB 1005
68259-12-1	PENS:	38 U	ng L	38	3/60/16 = 10	37618	ASB 1005
335-67-1	PFOA	38 U	ng L	38	5/09/18 -9:18	3/16/18	ASB 1005
1763-23-1	PFOS:	46	ng L	38	2.09(18) 9.19	\$16/18 116	ATB 1005
2706-90-3	PFPeA	72	ng L	38	5.09/18 9.18	5/16/18 1.10	A5B 1005
2706-91-4	PFPeS	38 U	ng L	38	9.090 18 9.16	13618	A3B 1008
72629-94-8	PFTrDA	150 U. J. QC-5	ng L	150	5/09/18 9.18	5/16/18	A\$B 1005
2058-94-8	PFUdA	38 Ü	ngT.	38	5.00 TH 9.18	V16-18	A5B 1005

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: CT01-0418
 Lab ID: E181703-07

 Station ID: CT01
 Matrix: Surface Water

Date Collected: 4/24/18 16:05

CAS Number	(Amage)	Small Contract	Unite	1000	Proposed	interi	distant.
757124-72-4	4:2FT8	39 U	ngT.	39	8-09-16 9-16	3/16/18 1.38	ASB 1008
27619-97-2	6:2FTS	150 U	ng L	150	5/00/18 9:18	9/16/18 1:36	A3B 1008
39108-34-4	8:2FTS	39 11	ng L	-39	9.00 18 9.38	53618 1.36	A3B 1005
754-91-6	FOSA	39 U	ng/L	39	5/09/18 9:18	3/16/18 1:38	ASB 100S
13252-13-6	HFFO-DA	39 LI	ng L	39	3/00/18 9:18	3/16/18	ASD 1006.
2355-31-9	N-MeFOSAA	39 U	ng L	39	5/09/18 9/18	3/16/18 1:36	ASB 1005
375-22-4	PFBA	39 ti	ngL	39	9.18	51618	ASB 1008
375-73-5	PFBS	27 J. Q-2	ng L	39	5/09/16 9:18	3/16/18 1/38	ASB 1005
335-76-2	PFDA	77 U	ngL	77	9700-18 = 18	3/16/18 1:30	A3B 1008
307-55-1	PFDoA	39 U, J, QL-1	ng L	39	5/09/18 9:18	5/16/18 1:38	A3B 1005
335-77-3	PFDS	150 U	ng/L	150	3,0978 F.18	5/16/18 1.36	ASR 1005
375-85-9	PFHpA	39 U	ng/L	39	5/09/16 11.18	3/16/18	ASB 1005
375-92-8	PFHpS	39 U	ng/L	39	5/00/18 9 78	57678	A20 1005
307-24-4	PFHxA	100	ng/L	39	5/00/18 9:18	5/16/18 1:38	ASB 1005
355-46-4	PFHsS	39 U	ng L	39	A09/18 #18	3/16/16	AEB 1005
375-95-1	PFNA	39 U	ng1.	39	5/09/18 9:18	3/16/18 1/38	ASB 1005
68259-12-1	PFNS:	39 U	ng L	39	3/00/16 F 18	516 IS	ASB 1005
335-67-1	PFOA	39 U	ng L	39	5/09/18 -9:18	3/16/18 1:38	A5B 1005
1763-23-1	PFOS:	20 3, Q-2	ng L	39	2.09(18) 9.19	57678 136	AIB 1005
2706-90-3	PFPeA	130	ng L	39	5/09/18 9:18	5/16/18 1:38	ASB 1005
2706-91-4	PFPeS	39 U	ng L	39	9.090 18 9.16	136/8	ASB 1008
72629-94-8	PFTrDA	150 U. J. QC-5	ng L	150	5/09/18 9.18	5/16/18 1:38	A5B 1005
2058-94-8	PFUdA	39 🗓	ng L	39	5.00 TH	51618 1.38	ASB 1008

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: CT02-0418
 Lab ID: E181703-08

 Station ID: CT02
 Matrix: Surface Water

Date Collected: 4/24/18 16:30

CAS Number	(Amelia)	Smith Confiden	Daile	1000	Proposed	Sales	distant.
757124-72-4	4:2FT8	41 U	ng L	41	8-00-16 -0-16	876/18 201	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/09/18 9:18	5/16/18 2:01	A3B 1006
39108-34-4	8:2FTS	41 U	ng L	41	9.00 TS 9.38	1/16/18 2:01	A3B 1006
754-91-6	FOSA	41 U	ng/L	41	5/09/18 9:18	3/16/18	ASB 1008
13252-13-6	HFFO-DA	41 U	ng L	41	3/00/18 9:18	3/16/18	A3D 1006
2355-31-9	N-MeFOSAA	41 U.J. QS-3	ng L	41	5/09/18 9/18	3/16/18 2:01	ASB 1005
375-22-4	PFRA	41 U	ngL	41	9:18	51618 201	ASB 1008
375-73-5	PFBS	23 J. Q-2	ng L	41	3/09/16 9:18	51618 201	ASB 1005
335-76-2	PFDA	81 U	ng L	81	900018 = 18	2/16/18	A38 1005
107-55-1	PFDoA	41 U, J, H-6, QL-1	ng L	41	5/09/18 9:18	9/25/18 6/26	A3B 1005
335-77-3	PFDS	160 U	ng/L	160	3.09/18 E.18	5/16/18 2/11	ASS 1005
375-85-9	PFHpA	41 U	ng L	41	5/09/18 9:18	3/16/18 2/4	ASB 1005
375-92-8	PFHpS	41 U	ng/L	41	5/00/18 9:78	201	A20 1005
107-24-4	PFHxA	68	ng/L	41	5/00/18 9:18	5/16/18 2 (II	ASB 1005
155-46-4	PFHsS	41 U	ng L	41	A0918 938	91618 201	ASB 1005
375-95-1	PFNA	41 U	ng L	41	5/09/18 9:18	3/16/18 2/01	ASB 1005
58259-12-1	PFNS:	41 D	ng L	41	3/00/16 F 18	3/36/18	ASB 1005
335-67-1	PFOA	41 U	ng L	41	5/09/18 -9:18	2/16/18 2:01	ASB 1008
1763-23-1	PFOS:	21 7, Q-2	ng L	41	2.09/18 9/19	5/36/18 2:01	ATB 1005
2706-90-3	PFPeA	120	ng L	41	5/09/18 9:18	3/16/18 2-01	ASB 1005
2706-91-4	PFPeS	41 U	ng L	41	9.090 18 9.16	\$16/18 201	ASS 1008
72629-94-8	PFTrDA	160 U. J. H-6, QC-5	ng L	160	5/09/18 9:18	5/25/18 6/25	ASB 1005
1058-94-8	PFUdA	41 17	ng:L	41	2/09/18 9/18	3/16/18	ASB 1005

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: CT03-0418
 Lab ID: E181703-09

 Station ID: CT03
 Matrix: Surface Water

Date Collected: 4/25/18 9:30

CAS Number	Anan	Small Confess	Limite	100	Prepared	interi	distant.
757124-72-4	4:2FT8	39 U	ngT.	39	8-00-TE	87678 228	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/00/18 9:18	5/16/16 2:24	A3B 1008
9108-34-4	8:2FTS	39 <u>L</u> I	ng L	39	938	\$16/18 2:34	A3B 1006
54-91-6	FOSA	39 U	ng/L	39	5/09/18 9:18	3/16/18	ASB 1005
3252-13-6	HPPO-DA	39 U	ng L	39	3/09/18 9:19	3/16/18	AND 1006
355-31-9	N-MeFOSAA	39 U	ng L	39	5/09/18 9/18	3/16/18 2:24	ASB 1005
75-22-4	PFBA	18 J. Q-2	ngL	39	9.18	51618 228	ASB 1008
75-73-5	PFBS	29 J, Q-2	ng L	39	3/09/16 9.18	3/16/18 2/24	ASB 1005
35-76-2	PFDA	78 U	ng L	78	9709/18 9/18	3/16/18 2/28	A33 1005
07-55-1	PFDoA	39 U, J, H-6, QL-1	ng L	39	5/09/18 9:18	9/25/18 e:48	A3B 1005
35-77-3	PFDS	160 U	ng/L	160	509518 E.10	5/16/18 2.28	ASS 1005
75-85-9	PFHpA	15 J, Q-2	ng L	39	5/09/18 9:38	3/16/18	ASB 1005
75-92-8	PFHpS	39 U	ng/L	39	5/00/18 9:78	51618 - 224	A20 1005
07-24-4	PFHxA	91	ng/L	39	5/00/18 9:18	5/16/18 2:24	ASB 1005
55-46-4	PFH <sub>8</sub> S	39 U	ng L	39	A0918 #38	91616	ASB 1005
75-95-1	PFNA	39 U	ng1.	39	5/09/18 9:18	3/16/18 2/24	ASB 1005
8259-12-1	PENS	39 U	ng L	39	3/00/16	516 IS	ASS 1005
35-67-1	PFOA	39 U	ng L	39	5/09/18 9:18	3/16/18 2:24	ASB 1008
763-23-1	PFOS	26 J, Q-2	ng L	39	2.09/18 9.18	5/36/18 2:04	ATB 1005
706-90-3	PFPeA	110	ng L	39	5.09/16 9:18	3/16/18 2.24	ASB 1005
706-91-4	PFPeS	39 U	ng L	39	9.090 18 9.10	\$16/18 2:24	ASS 1008
2629-94-8	PFTrDA	160 U. J. H-6, QC-5	ng L	160	3/09/18 9/18	5/25/18 6-88	A5B 1005
058-94-8	PFU4A	39.17	ng:L	39	2/09/18 9/18	3/16/18	ASB 1005

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: CT04-0418
 Lab ID: E181703-10

 Station ID: CT04
 Matrix: Surface Water

Date Collected: 4/25/18 9:55

CAS Number	(Amage)	Street, OwnStreet	Unite	1000	Prepared	interi	distant.
757124-72-4	4:2FT8	38 U	ngT.	38	8-00-TE	87678 246	ASB 1005
27619-97-2	6:2FTS	150 U	ng L	150	5/00/18 9:18	5/16/18 2:46	ASB 1008
39108-34-4	8:2FTS	38 U. J. QM-3	ng L	38	938	516-18 2-46	A3B 1006
754-91-6	FOSA	38 U	ng/L	38	5/09/18 9:18	3/16/18 2-46	ASB 1005
13252-13-6	HFFO-DA	38 U	ng L	38	3/09/18 9:19	3/16/19	ASD 1006
1355-31-9	N-MeFOSAA	38 U	ng L	38	5/09/18 9/18	3/16/18 2.40	ASB 1005
175-22-4	PFBA	18 J. Q-2	ngL	38	9.18	3/16/18	ASB 1008
175-73-5	PFBS	22 J, Q-2	ng L	38	3/09/16 9.18	3/16/18 2.40	ASB 1005
335-76-2	PFDA	77 U	ng L	77	9709/18 9/18	3/16/18 2.40	A38 1005
107-55-1	PFDoA	38 U, J, H-6, QL-1	ng L	38	5/09/18 9:18	9/25/18 7.11	A3B 1005
135-77-3	PFDS	150 U	ng/L	150	509518 E.10	5/16/18 2-86	ASS 1005
375-85-9	PFHpA	20 J, Q-2	ng L	38	5/09/18 9:18	3/16/18	ASB 1005
75-92-8	PFHpS	38 U	ng/L	38	5/00/18 9:78	2/16/18	A20 1005
107-24-4	PFHxA	66	ng/L	38	5/00/18 9:18	9/16/18 2.40	ASB 1005
155-46-4	PFHsS	38 U	ng L	38	A0918 #38	91616 240	ASB 1005
75-95-1	PFNA	38 U	ng1.	38	5/09/18 9:18	3/16/18 2:46	ASB 1005
8259-12-1	PFNS:	38 U	ng L	38	3/00/16	31618	ASS 1005
35-67-1	PFOA	38 U	ng L	38	5/09/18 9:18	3/16/18 2:40	ASB 1008
1763-23-1	PFOS:	38 U	ng L	38	*109/18 *2.18	576/18 2.40	ATR 1005
2706-90-3	PFPeA	160	ng L	38	5.09/18 9:18	3/16/18 2:40	A5B 1005
2706-91-4	PFPeS	38 U	ng L	38	9.190/18 9.16	5/16/18 2.46	ASB 1005
72629-94-8	PFTrDA	150 U. J. H-6, QC-5, QM-3	ng L	150	5.09/18 9.18	5/25/18 2:11	A5B 1005
058-94-8	PFUdA	38 U	ng1.	38	3/09/18 9/18	3/16/18	ASB 1005

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Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: CT05-0418
 Lab ID: E181703-11

 Station ID: CT05
 Matrix: Surface Water

Date Collected: 4/25/18 10:20

CAS Number	(Amount	Smith Desiries	Units	1000	Proposed	Securit	distant.
757124-72-4	4:2FT8	38 U	ng1.	38	8-00-TE	376/18 349	ASB 1005
27619-97-2	6:2FTS	150 U	ng L	150	5/00/18 9:18	5/16/16 3:59	ASB 1008
19108-34-4	8:2FTS	38 U	ng L	38	9.00 TS	3/16/18	A3B 1005
754-91-6	FOSA	38 U	ng/L	38	5-09/18 9:18	3/16/18	ASB 100S
13252-13-6	HFFO-DA	38 U	ng L	38	N09-18	3/16/18	ASD 1006.
1355-31-9	N-MeFOSAA	38 U.J. QS-3	ng L	38	5/09/18 9/18	3/16/18	ASB 1005
375-22-4	PFBA	20 / 0-2	ngL	38	9:18	3/16/18	ASB 1008
375-73-5	PFBS	22 J, Q-2	ng L	38	5/09/16 9:18	3/16/18 3:00	ASB 1005
335-76-2	PFDA	76 U. J. QS-3	ng L	76	9709/18 9/18	3/16/18	A33 1005
307-55-1	PFDoA	38 U, J, H-6, QL-1	ng L	38	5/09/18 9:18	5/25/18 7:33	A3B 1005
335-77-3	PFDS	150 U	ng/L	150	509518 E.10	5/16/18 2:00	ASR 1005
375-85-9	PFHpA	18 J, Q-2	ng/L	38	5/09/18 9:38	3/16/18	ASB 1005
375-92-8	PFHpS	38 U	ng/L	38	5/00/18 9:78	57678 3 cm	A211 1005
107-24-4	PFHxA	78	ng L	38	5/00/18 9:18	5/16/18 3:00	ASB 1005
155-46-4	PFHsS	38 U	ng L	38	A0918 #38	3/16/16	AEB 1005
375-95-1	PFNA	38 U	ng/L	38	5/09/18 9:18	3/16/18 3/09	ASB 1005
58259-12-1	PFNS:	38 U	ng L	38	3/00/16	3/16/18	ASS 1005
335-67-1	PFOA	38 U	ng L	38	5/09/18 9:18	3/16/18	A5B 1005
1763-23-1	PFOS:	38 U	ng L	38	2.09/18 9.18	50578 3-08	AIB 1005
2706-90-3	PFPeA	170	ng L	38	5/09/18 9:18	3/16/18	ASB 1005
1706-91-4	PFPeS	38 U	ngL	38	9.090 18 9.10	3.00	ASB 1008
72629-94-8	PFTrDA	150 U. J. H-6, QC-5	ng L	150	3/09/18 9/18	5/25/18 7:33	A\$B 1005
1058-94-8	PFU4A	38 U.J. QS-3	ng:L	38	3/09/18 9/18	3/16/16	ASB 1008

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. ld; 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: CT06-0418
 Lab ID: E181703-12

 Station ID: CT06
 Matrix: Surface Water

Date Collected: 4/25/18 10:45

CAS Number	(American)	Smith Confiden	Daile	1000	Proposal	Sales	distant.
757124-72-4	4:2FT8	41 U	ng L	- 41	8-00-TE .	\$1618 331	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/00/18 9:18	5/16/18 3:37	ASB 1008
39108-34-4	8:2FTS	41 U	ng L	41	938	\$1618 331	A3B 1005
754-91-6	FOSA	41 U	ng/L	41	5/09/18 9:18	3/16/18	ASB 1005
13252-13-6	HFFO-DA	41 U	ng L	41	N09-18	3/16/18	ASD 1006.
1355-31-9	N-MeFOSAA	41 U	ng L	-41	5/09/18 9/18	3/16/18	ASB 1005
375-22-4	PFBA	41 <u>U</u>	ngL	41	9.18	5/16/18 3/3[	ASB 1008
375-73-5	PFBS	41 U	ng L	41	3/09/16 9:18	3/16/18	ASB 1005
335-76-2	PFDA	82 U. J. QS-3	ng L	82	9709/18 = 18	3/16/18	A3B 1005
307-55-1	PFDoA	41 U, J, H-6, QL-1	ng L	41	5/09/18 9:18	9/25/18 7:56	A3B 1005
335-77-3	PFDS	160 U	ng/L	160	3/09/18 E.18	5/16/18 3/31	ASR 1005
375-85-9	PFHpA	41 U	ng L	41	5/09/18 9:18	3/16/18	ASB 1005
375-92-8	PFHpS	41 U	ng/L	41	5/00/18 9:78	37678	AXII 1005
107-24-4	PFHxA	41 U	ng/L	41	5/00/18 9:18	5/16/18 3.31	ASB 1005
155-46-4	PFHaS	41 U	ng L	-41	A0918 938	9/16/16	ASB 1005
375-95-1	PFNA	41 U	ng L	41	5/09/18 9:18	3/16/18 3/31	ASB 1005
8259-12-1	PFNS:	41 D	ng L	41	3/00/16	3/16/18 3/31	ASS 1005
135-67-1	PFOA	41 U	ng L	41	5/09/18 -9:18	3/16/18 3/31	ASB 1005
1763-23-1	PFOS:	83	ng L	41	*109/18 *2.18	5/36/18 3:31	AIB 1005
2706-90-3	PFPeA	30 J, Q-2	ng L	41	5.09/18 9:18	3/16/18 3/31	ASB 1005
2706-91-4	PFPeS	41 U	ng L	41	9.190/18 9.16	331	ASB 1008
72629-94-8	PFTrDA	160 U. J. H-6, QC-5	ng L	160	5/09/18 9.18	5/25/18 2.56	A5B 1005
1058-94-8	PFUdA	41 U.J. QS/3	ng:L	41	2109/18	3/16/18	ASB 1008

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. ld: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: CT07-0418 Lab ID: E181703-13
Station ID: CT07 Matrix: Surface Water

Date Collected: 4/25/18 11:10

	(Amagen)		Danie		Prepared	interi	Anna
757124-72-4	4:2FTS	41.0	ngT.	41	8-99-18 9-18	37635 3.54	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/09/18 9:18	5/16/18 3:54	ASB 1008
39108-34-4	8:2FTS	41 🗓	ng L	41	5.00 TS 9.38	516/18 3.54	A3B 1006
754-91-6	FOSA	41 U	ng/L	41	5-09/18 9:18	3/16/18 3:54	ASB 100S
13252-13-6	HFFO-DA	41 U	ng L	41	3/00/18 9:18	3/16/18	ASD 1006.
2355-31-9	N-MeFOSAA	41 U, J, QS-3	ng L	41	5/09/18 9/18	3/36/38 3:54	ASB 1005
375-22-4	PFBA	41 U	ngL	41	9.18	37678	ASB 1008
375-73-5	PFBS	41 U	ng L	41	5/09/16 9:18	31618 3.51	ASB 1005
335-76-2	PFDA	82 U	ng L	82	9.00/18 0.18	3/16/18	A33 1005
307-55-1	PFDoA	41 U, J, H-6, QL-1	ng L	41	5/09/18 9:18	5/25/18 8:18	A3B 1005
335-77-3	PFDS	160 U	ng/L	160	5.09/18 #.18	3/16/18	ASS 1005
375-85-9	PFHpA	41 U	ng L	41	5/09/18 11.18	3/16/18	ASB 1005
375-92-8	PFHpS	41 U	ng/L	41	5/00/18 9:78	334	A20 1005
307-24-4	PFHxA	41 U	ng/L	41	5/00/18 9:18	3/16/18 3/54	ASB 1005
355-46-4	PFHsS	41 U	ng L	41	A0918 938	93616	ASB 1005
375-95-1	PFNA	41 U	ng L	41	5/09/18 9:18	3/16/18 3/54	ASB 1005
68259-12-1	PFNS	41 U	ng L	41	3/00/16 F 18	376-18	ASS 1005
335-67-1	PFOA	41 U	ng L	41	5/09/18 -9:18	3/16/18	ASB 1008
1763-23-1	PFOS:	4) 0	ng L	41	2.09/18 9/19	5/16/18 3/54	ATB 1005
2706-90-3	PFPeA	41 U	ng L	41	5/09/18 9:18	3/16/18 3.54	ASB 1005
2706-91-4	PFPeS	41.0	ng L	41	5.590/18 # 16	\$16 tH 3.54	ASB 1005
72629-94-8	PFTrDA	160 U. J. H-6, QC-5	ng L	160	5.09/18 9.18	5/25/18 8.18	A\$B 1005
2058-94-8	PFUdA	41 U.J. QS-3	ng:L	41	3/09/18 9/18	376/38	ASB 1005

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Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: CT08-0418
 Lab ID: E181703-14

 Station ID: CT08
 Matrix: Surface Water

Date Collected: 4/25/18 11:30

CASE Number	(American)	Smith Confiden	Daile	1000	Proposal	Sales	distant.
757124-72-4	4:2FT8	39 U	ngT.	39	8-00-TE	37678 416	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/00/18 9:18	9/16/16 #36	ASB 1008
19108-34-4	8:2FTS	39 U	ng L	39	9.00 TS	01618 #36	A3B 1005
754-91-6	FOSA	39 U	ng/L	39	5-09/18 9:18	3/16/18 4 16	ASB 100S
13252-13-6	HFFO-DA	39 U	ng L	39	N09-18	3/16/18	AND 1008.
1355-31-9	N-MeFOSAA	39 Ú	ng L	39	5/09/18 9/18	3/16/18 4:10	ASB 1005
375-22-4	PFBA	18 J. @-2	ngL	39	9.18	3/16/18 4/36	ASB 1008
375-73-5	PFBS	28 J, Q-2	ng L	39	3/09/16 9:18	51618 436	ASB 1005
335-76-2	PFDA	78 U	ng L	78	9709-18 0-18	1/16/18 4 18	A33 1005
307-55-1	PFDoA	39 U, J, H-6, QL-1	ng L	39	5/09/18 9:18	9/25/18 8:41	A3B 1005
335-77-3	PFDS	160 U	ng/L	160	3,0078 E.18	9/16/18	ASS 1005
375-85-9	PFHpA	39 U	ng L	39	5/09/18 9:18	3/16/18	ASB 1005
375-92-8	PFHpS	39 U	ng/L	39	5/00/18 9:78	5716/18 -	A20 1005
107-24-4	PFHxA	63	ng/L	39	5/00/18 9:18	5/16/18 4.10	ASB 1005
155-46-4	PFHaS	39 U	ng L	39	A0918 938	9/16/18 4/10	AEB 1005
375-95-1	PFNA	39 U	ng L	39	5/09/18 9:18	31618 +16	ASB 1005
58259-12-1	PFNS:	39 U	ng L	39	3/00/16	316 IR	ASB 1005
335-67-1	PFOA	39 U	ng L	39	5/09/18 -9:18	3/16/18 4.10	ASB 1005
1763-23-1	PFOS:	39 U	ng L	39	2.09/18 2.19	536/18 4.36	AIB 1005
2706-90-3	PFPeA	130	ng L	39	5.09/18 9:18	3/16/18 4:10	A5B 1005
2706-91-4	PFPeS	39 U	ng L	39	9.190/18 9.16	\$36/18 \$36	ASB 1008
72629-94-8	PFTrDA	160 U. J. QC-5, H-6	ng L	160	5/09/18 9.18	5/25/18 8:41	A\$B 1005
1058-94-8	PFUdA	39.17	ng:L	39	2109/18	3/16/10	ASB 1005

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. ld; 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: CT09-0418
 Lab ID: E181703-15

 Station ID: CT09
 Matrix: Surface Water

Date Collected: 4/25/18 12:00

CAS Number	(American)	Smith Qualifier	Date	1000	Proposed	interi	Same .
757124-72-4	4:2FT8	39 U	ngT.	39	8-09-16 9-16	376/15 #30	ASB 1005
7619-97-2	6:2FTS	150 U	ng L	150	5/09/18 9:18	\$7,678 4:30	ASB 1006
9108-34-4	8:2FTS	39 <u>L</u> I	ng L	-39	9.00 18 9.38	V16/18	A3B 1005
54-91-6	FOSA	39 U	ng/L	39	5/09/18 9:18	3/16/18 4:39	ASB 1005
3252-13-6	HFFO-DA	39 U	ng L	39	3/00/18 9:18	3/16/18	AND 1006.
355-31-9	N-MeFOSAA	39 Ú	ng L	39	5/09/18 9/18	3/16/18 4:30	ASB 1005
75-22-4	PFBA	39 <u>U</u>	ngL	39	9.18	3/16/18	ASB 1008
75-73-5	PFBS	39 U	ng L	39	3/09/16 9:18	3/16/18 4:39	ASB 1005
35-76-2	PFDA	77 U	ng L	77	9709/18 9/18	3/16/18 4:30	ASB 1008
07-55-1	PFDoA	39 U, J, H-6, QL-1	ng L	39	5/09/18 9:18	5/25/18 9:00	ASB 1005
35-77-3	PFDS	150 U	ng/L	150	3,9978 E.18	9/16/18	ASR 1005
75-85-9	PFHpA	39 U	ng L	39	5/09/18 11.18	3/16/18	ASB 1005
75-92-8	PFHpS	39 U	ng/L	39	5/00/18 9:78	439	A20 1005
07-24-4	PFHxA	39 U	ng/L	39	5/00/18 9:18	9/16/18 4:30	ASB 1005
55-46-4	PFHsS	39 U.	ng L	39	A0918 #38	91616	AEB 1005
75-95-1	PFNA	39 U	ng L	39	5/09/18 9:18	3/16/18 4/30	ASB 1005
8259-12-1	PFNS:	39 U	ng L	39	3/00/16	3/16/18 4:39	ASB 1005
35-67-1	PFOA	39 U	ng L	39	5/09/18 -9:18	3/16/18 4:30	ASB 1005
763-23-1	PFOS:	39 U	ng L	-39	2.09/18 9:18	5/36/18 4/39	ATB 1005
706-90-3	PFPeA	18 J. Q-2	ng L	39	5/09/18 9:18	5/16/18 4:39	A5B 1005
706-91-4	PFPeS	39 U	ng L	39	9.090 18 9.16	136/18	ASS/1008
2629-94-8	PFTrDA	150 U. J. H-6, QC-5	ng L	150	3/09/18 9/18	5/25/18 10/3	A5B 1005
058-94-8	PFUdA	39.17	ng:L	39	3/09/18 9/16	3/16/18	ASB 1008

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. ld; 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: <u>CT09-0418-D</u>
 Lab ID: <u>E181703-16</u>

 Station ID: <u>CT09</u>
 Matrix: Surface Water

Date Collected: 4/25/18 12:05

CASE Number	(American)	Smith Confiden	Daile	1000	Proposal	Sales	distant.
757124-72-4	4:2FT8	39 U	ngT.	39	8-00-TE	836/15 301	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/00/18 9:18	5/16/16 5:01	ASB 1008
39108-34-4	8:2FTS	39 U, J, Q8-3	ng L	39	938	1/16/18 5:01	A3B 1006
754-91-6	FOSA	39 U	ng/L	39	5/09/18 9:18	3/16/18 5:01	ASB 1005
13252-13-6	HFFO-DA	39 U	ng L	39	N09-18	3/36/86	ASD 1006.
1355-31-9	N-MeFOSAA	39 U	ng L	39	5/09/18 9/18	3/16/18 3/01	ASB 1005
975-22-4	PFBA	39 <u>U</u>	ngL	39	9:18	51618	ASB 1008
375-73-5	PFBS	39 U	ng L	39	5/09/16 9:18	5/16/18 5/01	ASB 1005
335-76-2	PFDA	78 U	ng L	78	9709/18 0/18	3/16/18 Rell	A33 1005
307-55-1	PFDoA	39 U, J, H-6, QL-1	ng L	39	5/09/18 9:18	9/25/18 9/28	A3B 1005
35-77-3	PFDS	160 U	ng/L	160	3/09/18 E.18	5/16/18 2-01	ASR 1005
375-85-9	PFHpA	39 U	ng L	39	5/09/18 9:18	3/16/18 3/01	ASB 1005
375-92-8	PFHpS	39 U	ng/L	39	5/00/18 9:78	57678	AXII 1005
107-24-4	PFHxA	39 U	ng/L	39	5/00/18 9:18	5/16/18 5/01	ASB 1005
155-46-4	PFHsS	39 U	ng L	39	A0918 938	9/16/16 2-01	AEB 1005
75-95-1	PFNA	39 U	ng L	39	5/09/18 9:18	3/16/18 5/01	ASB 1005
8259-12-1	PFNS:	39 U	ng L	39	3/00/16	3/16/18 2-01	ASB 1005
335-67-1	PFOA	39 U	ng L	39	5/09/18 -9:18	3/16/18 5/01	ASB 1005
1763-23-1	PFOS:	39 LI	ng L	39	2.09/18 2.19	5/16/18 5:01	AIB 1005
2706-90-3	PFPeA	17 J. Q-2	ng L	39	5.09/18 9:18	3/16/18 3:01	ASB 1005
2706-91-4	PFPeS	39 U	ng L	39	9.190/18 9.16	916/18 201	ASB 1008
72629-94-8	PFTrDA	160 U. J. H-6, QC-5	ng L	160	5/09/18 9.18	5/25/18 9/25	A\$B 1005
058-94-8	PFUdA	39 17	ng:L	39	2109/18	37678	ASB 1005

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: CT10-0418
 Lab ID: E181703-17

 Station ID: CT10
 Matrix: Surface Water

Date Collected: 4/25/18 12:15

	(Amagen)		Danie		Prepared	interi	Anna C
757124-72-4	4:2FTS	39 U	ngT.	39	8-99-18 9-18	87678 128	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/09/18 9:18	5/16/16 5/28	ASB 1008
39108-34-4	8:2FTS	39 <u>L</u> J	ng L	39	5.00 TS 9.38	10618 504	A3B 1006
754-91-6	FOSA	39 U	ng/L	39	5-09/18 9:18	3/16/18 5/24	ASB 100S
13252-13-6	HFFO-DA	39 U	ng L	39	3/00/18 9:18	3/16/18	ASD 1006.
2355-31-9	N-MeFOSAA	39 Ú	ng L	39	5/09/18 9/18	9/16/18 9/24	ASB 1005
175-22-4	PFBA	39 <u>U</u>	ngL	39	9.18	51618 528	ASB 1008
375-73-5	PFBS	39 U	ng L	39	5/09/16 9:18	51618 524	ASB 1005
335-76-2	PFDA	78 U	ng L	78	9.00/18 0.18	3/16/18 5/28	A3B 1008
307-55-1	PFDoA	39 U. J. QL-1.11-6	ng L	39	5/09/18 9:18	5/25/18 9:40	A3B 1005
335-77-3	PFDS	160 U	ng/L	160	5.09/18 E.18	5/16/18 3/28	ASS 1005
375-85-9	PFHpA	39 U	ng L	39	5/09/18 9:18	3/16/18	ASB 1005
375-92-8	PFHp8	39 U	ng/L	39	5/00/18 9:18	51618	AND 1005
307-24-4	PFHxA	39 U	ng/L	39	5/00/18 9:18	5/16/18 5/24	ASB 1005
155-46-4	PFHsS	39 U	ngT.	39	A09/16 #18.	5/16/16 3/24	AEB 1005
375-95-1	PFNA	39 U	ng/L	39	5/09/18 9:18	3/16/18 3/24	ASB 1005
68259-12-1	PFNS:	39 U	ng L	39	3.00/16 F 18	336 IS	ASB 1005
335-67-1	PFOA	39 U	ng L	39	5/09/18 9:18	1/16/18 3/24	ASB 1005
1763-23-1	PFOS	39 11	ng L	39	2.0818	576/18 524	ATB 1005
2706-90-3	PFPeA	39 U	ng L	39	5/09/18 9:18	5/16/18 5/24	ASB 1005
2706-91-4	PFPeS	39 U	ng L	39	5.570-18 # 16	\$16/18 3.24	A3B 1008
72629-94-8	PFTrDA	160 U, J, H-6, QC-5	ng L	160	5/09/18 9:18	5/25/18 9.45	ASB 1005
2058-94-8	PFU4A	39 U.J. QS-3	ng L	39	3/09/18 9/18	37678	ASB 1005

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: G100-0418
 Lab ID: E181703-18

 Station ID: G100
 Matrix: Surface Water

Date Collected: 4/24/18 12:40

CAS Number	(Amagen)	Small Confiden	Limite	1000	Prepared	interest	Service .
757124-72-4	4:2FT8	41.0	ngT.	341	8-09-TE	80618 3.0	ASS 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/00/18 9:18	51618 5.47	A3B 1008
19108-34-4	8:2FTS	41 0, 3, 08-3	ng L	41	938	\$16/18 5/47	A33/1006
754-91-6	FOSA	41 U	ng/L	41	5/09/18 9:18	3/16/18 5:47	ASB 100S
3252-13-6	HFFO-DA	41 U	ng L	41	N00/18	376/18	AND 1006.
355-31-9	N-MeFOSAA	41 U	ng L	41	5/09/18 #18	3/16/18 3:47	ASB 1005
75-22-4	PFBA	19 J. 0-2	ngL	41	9.18	3/16/18 3.47	ASB 1008
75-73-5	PFBS	120	ng L	41	3/09/16 9.18	51618 5.47	ASB 1005
35-76-2	PFDA	82 U	ng L	82	9309/18 9/18	3/16/18	A33 1005
07-55-1	PFDoA	41 U, J, H-6, QL-1	ng L	41	5/09/18 9:18	9/25/18 10:11	A3B 1005
35-77-3	PFDS	160 U	ng/L	160	3,09/18 E.18	5/16/18 5.47	ASR 1005
75-85-9	PFHpA	16 J, Q-2	ng L	41	5/09/18 9:38	3/16/18	ASB 1005
75-92-8	PFHpS	41 U	ng/L	41	5/00/18 9/38	51618	A20 1005
07-24-4	PFHxA	51	ng/L	41	5/00/18 9:18	9/16/18 5:47	ASB 1005
55-46-4	PFHsS	41 U	ng L	-41	A0918 9.18	91618	ASB 1005
75-95-1	PFNA	41 U	ng1.	41	5/09/18 9:18	3/16/18 5/47	ASB 1005
8259-12-1	PFNS:	41 D	ng L	41	3/00/16	316/18	ASB 1005
35-67-1	PFOA	32 J, Q-2	ng L	41	5/09/18 -9:18	3/16/18 3/47	ASB 1005
763-23-1	PFOS:	32 3, 0,2	ng L	41	2.09/18 2.19	576/18 3-47	AIB 1005
706-90-3	PFPeA	68	ng L	41	5/09/16 9:18	3/16/18 5:47	ASB 1005
706-91-4	PFPeS	41 U	ng L	41	9.090/18 9.16	\$16-18 3.67	ASS 1008
2629-94-8	PFTrDA	160 U, J, H-6, QC-5	ng L	160	5.09/18 9.18	5/25/18 10:11	A5B 1005
058-94-8	PFUdA	41 17.7, Q8-3	ng:L	41	200/18	37638	ASB 1008

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. ld; 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

Sample ID: OF01-0418 Lab ID: E181703-19
Station ID: OF01 Matrix: Surface Water

Date Collected: 4/24/18 14:40

CAS Number	(America)	Smith Confiden	Daile	1000	Proposal	Sales	distant.
757124-72-4	4:2FT8	41 U	ng L	- 41	8-00-TE .	37678 649	ASB 1005
27619-97-2	6:2FTS	160 U	ng L	160	5/00/18 9:18	5/16/TH 6/50	ASB 1006
39108-34-4	8:2FTS	41 0	ng L	41	938	V16/18	A3B 1006
754-91-6	FOSA	41 U	ng/L	41	5/09/18 9:18	3/16/18 6/09	ASB 100S
13252-13-6	HFPO-DA	41 U	ng L	41	N09-18	3/16/18	AND 1006.
1355-31-9	N-MeFOSAA	41 U	ng L	-41	5/09/18 9/18	3/16/18 6/00	ASB 1005
175-22-4	PFBA	41 <u>U</u>	ngL	41	9.18	3/16/18 8:00	ASB 1008
175-73-5	PFBS	110	ng L	41	5/09/16 9:18	51618 6:00	ASB 1005
335-76-2	PFDA	82 U. J. QS-3	ng L	82	9709/18 0/18	1/16/18 # (0)	A3B 1005
107-55-1	PFDoA	41 U, J, H-6, QL-1	ng L	41	5/09/18 9:18	9/25/18 10/34	ASB 1005
35-77-3	PFDS	160 U	ng/L	160	3,0078 E.18	5/16/18	ASR 1005
175-85-9	PFHpA	19 J, Q-2	ng L	41	5/09/18 9:18	3/16/18	ASB 1005
375-92-8	PFHpS	41 U	ng/L	41	5/00/18 9:78	5716/18	A20 1005
107-24-4	PFHxA	42	ng/L	41	5/00/18 9:18	5/16/18 6:00	ASB 1005
155-46-4	PFH <sub>8</sub> S	41 U	ng L	-41	A0918 938	9/16/16	ASB 1005
75-95-1	PFNA	41 U	ng L	41	5/09/18 9:18	3/16/18 @-09	ASB 1005
8259-12-1	PFNS:	41 U	ngL	-41	3/66/16 F-18	3/16/18 6/10	ASB 1005
35-67-1	PFOA	38 J, Q-2	ng L	41	5/09/18 -9:18	2/16/18	A5B 1005
1763-23-1	PFOS:	55	ng L	41	2.09/18 2.19	5/16/18 6:08	AIB 1005
2706-90-3	PFPeA	70	ng L	41	5.18 5.18	3/16/18 0/09	ASB 1005
2706-91-4	PFPeS	41 U	ng L	41	9.190/18 9.16	1/16/16 0.00	ASS 1008
72629-94-8	PFTrDA	160 U. J. H-6, QC-5	ng L	160	5/09/18 9.18	5/25/18 10:34	A\$B 1005
058-94-8	PFU4A	41 U.J. QS/3	ng:L	41	2109/18	3/16/16	ASB 1008

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics

Project: 18-0142, Phase 1 PFASs Chattooga River

 Sample ID: OF02-0418
 Lab ID: E181703-20

 Station ID: OF02
 Matrix: Surface Water

Date Collected: 4/24/18 14:15

CAS Number	(American)	Smith Confiden	Daile	1000	Proposal	Sales	distant.
757124-72-4	4:2FT8	42.0	ngT.	42	8-00-TE	876/18 6.32	ASB 1005
27619-97-2	6:2FTS	170.0	ng L	170	5/00/18 9:18	5/16/18 n:32	ASB 1008
19108-34-4	8:2FTS	42 U	ng L	42	9.00 TS	V16/19	A3B 1005
754-91-6	FOSA	42 U	ng/L	42	5-09/18 9:18	3/16/18 6/32	ASB 1005
13252-13-6	HFFO-DA	42 U	ng L	42	N09-18	3/16/18 ±32	ASD 1006.
1355-31-9	N-MeFOSAA	42 U, J, QS-3	ng L	42	5/09/18 9/18	9/16/18 6/32	ASB 1005
375-22-4	PFBA	20 / 0-2	ngL	42	9:18	5/16/18 6/32	ASB 1008
375-73-5	PFBS	120	ng L	42	5/09/16 9:18	5/16/18 0:32	ASB 1005
335-76-2	PFDA	43 J.Q-2, QS-3	ng L	83	9709/18 0/18	1/16/18 8.32	A33 1005
307-55-1	PFDoA	42 U, J, QL-1, 11-6	ng L	42	5/09/18 9:18	9/25/18 10:56	A3B 1005
335-77-3	PFDS	170 U	ng/L	170	3/09/18 E.18	9/16/18 = 32	ASS 1005
375-85-9	PFHpA	20 J, Q-2	ng L	42	5/09/18 9:38	3/16/18 6:32	ASB 1005
375-92-8	PFHpS	42 U	ng/L	42	5/00/18 9:78	5/16/18 -	A20 1005
107-24-4	PFHxA	47	ng/L	42	5/00/18 9:18	9/16/18 ± 32	ASB 1005
155-46-4	PFHsS	42 U	ng L	-42	A0918 #38	9/16/16	AEB 1005
375-95-1	PFNA	42 U	ng1.	42	5/09/18 9:18	3/16/18 9/32	ASB 1005
58259-12-1	PFNS:	42 U	ng L	42	3/00/16	536-18 832	ASB 1005
335-67-1	PFOA	35 J, Q-2	ng L	42	5/09/18 9:18	3/16/18 6/32	ASB 1005
1763-23-1	PFOS:	73	ng L	42	20078 9.18	5/16/18 6/12	ATR 1005
2706-90-3	PFPeA	75	ng L	42	5.09/18 9:18	5/16/18 0.32	A5B 1005
2706-91-4	PFPeS	42 U	ngL	42	9.000 TH 9.10	\$16/18 8.32	A3B 1008
72629-94-8	PFTrDA	170 U. J. H-6, QC-5	ng L	170	3/09/18 9/18	5/25/18 10:56	A5B 1005
1058-94-8	PFU4A	42 U.J. QS-3	ng:L	42	3/09/18 9/18	3/16/18	ASB 1008

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics (SVOA) - Quality Control US-EPA, Region 4, SESD

Analyte	Rosult	Reporting Limit	Units	Spike Level	Source . Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1805038 - S PFC										
Blank (1805038-BLK1)				Prepared &	Analyzed	05/15/18				
ASB 100S										
42FTS	30	40	ng/L							1,
F2FT8	U	160								- 0
E2FTW	U	40								
OSA	U	40								1,
HFPO-DA	Ü	40								
4-MeFOBAA	U	40								ti
PFBA	Ü	40								-10
TES	U	40								
FDA	ED .	10	0.00							10
*FDnA	30	40	1.0							QC-L
10000	177	200								QC-5
										Q1,-1,
			123							Q8-3, U
PFDS	U	160								U
PTHpA	U	40								0
THps	.0	40								17
PFIXA	U	40								10
FHxS	0	40								
PFNA	U	40								U
PFNS	0	40								U
PFOA	U	40	1.5							- 0
PFO5	U	40	100							10
PFPeA	U	40								U
PFPeS	Ü	40	*							t
PFTiDA	U	160								QC-1,
										QC3, U
PFUdA	.07	40	*							0
Blank (1805038-BLK2)				Prepared &	Analyzed:	05/15/18				
ASB 100S										
12FTS	57	40	ng/L							10
6:2FTS	U	160								10
12FT8	Ü	40								
POSA	U	40								
HFFO-DA	U	40								- 0
N-MeFOSAA	U	40	183							12
TRA	U	40	1							10
PFRS	U	40								
PEDA.	ti ti	80								
Z/RXZ-C	-	307								
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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics (SVOA) - Quality Control US-EPA, Region 4, SESD

Analyte	Rosult	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1805038 - S PFC										
Blank (1805038-BLK2)				Prepared &	Analyzed:	05/15/18				
PFDoA	U	40	ng.T.							QC-1, QC-5, QL-1, U
FDS	U	160								
FHpA	U	40								1
FHpS	U	40								1
FHAA	U	40								
FHxS	10	40								- 1
FNA	U	40								1
FNS	U	40	,							
FOA	U	40								1
Pos		40								1
FPeA	10	40								-1
FPeS	10	40								1
PTHDA	.0	160								QC-L
mile.	22	-	. 25							QC3,1
FUMA	U	40								
CS (1805038-BS1)				Prepared &	Analyzed:	05/15/18				
SB 100S										
2FTS	349	40	ng:I.	372.51		93.8	70-130			
2FTH	304	160		378.49		30.2	70-130			
2FTS	432	40		382.47		333	70-130			
OSA	388	40		308.41		97.5	70-130			
FPO-DA	-401	40		398.41		101	70-130			
-MeFOSAA	395	40	150	308.41		99.0	70-130			
FBA	361	40		206.41		90.7	70-130			
FBS	330	40		352.59		93.7	70-130			
FDA	343	80		398.41		86.2	70-130			
FDoA.	166	40		398.41		47.3	70-130			QC-1, QC-5, QL-
FDS	499	160		384.46		130	20-130			QC-2
FHpA	358	49		308.41		80.8	70-130			
FHpd	390	40		378.49		103	70-130			
FHxA	341	40	1.5%	398.41		85.6	70-130			
FHsS	333	40		363.35		91.6	20-130			
FNA	336	40		398.41		84.2	70-130			
FNS	343	40		382.47		10.6	70-130			
FOA	378	40		398.41		94.9	70-130			
FOS	346	40	1.50	368.73		94.3	70-130			

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

## Semi Volatile Organics (SVOA) - Quality Control US-EPA, Region 4, SESD

Analyte	Rosult	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1805038 - S PFC										
LCS (1805038-BS1)				Prepared &	Analyzed:	05/15/18				
PFPeA	360	40	ng T.	398.41		90.4	70-130			
PFPeS	353	40		374.50		94.4	70-130			
THDA	433	160	1	398.41		109	70-130			QC: QC
PFUdA	403	40		398.41		101	70-130			- Qu
Matrix Spike (1805038-MS1)	Sot	rce: E181703-	10	Prepared: 0	5/09/18 A	nalyzed: 05	25/18			
ASB 100S										
4.2FTS	323	39	ng L	346.94	U	93.1	70-130			
×2FTB	324	39		352.50	U	92.0	20-130			
12FTS	304	39	1.5	356.22	U	85.2	70-130			QM
OSA	309	39		371.06	U	83.3	70-130			
IFPO-DA	356	39		371.06	U	95.9	70-130			
N-MeFOSAA	377	9.6		371.06	U.	102	70-130			
PFBA.	367	39		371.06	18.2	94.0	70-130			
THE	299	39		328.39	U	91.2	20-130			
PEDA	377	39		371.06	U	102	70-130			
FDoA	357	39	5.50	371.06	U	96.3	70-130			
PFES	293	39		358.07	U.	81.7	70-130			
PFHpA	373	39		371.06	20.3	94.9	70-130			
FHpS	331	39		352.50	D.	94.0	70-130			
THA	405	39		371.06	65.7	91.4	70-130			
PFHxS	318	39	3.1	338.40	U	94.1	70-130			
PFNA	306	39		371.06	U	82.9	70-130			
PFN8	283	39		356.22	U	79.5	70-130			
PFOA	355	39		371.06	U	95.7	70-130			
PFOS	312	39		343.41	U	90.9	70-130			
PFPeA	520	39		371.06	155	98.3	70-130			
PFP <sub>6</sub> S	342	9.6		348.79	U	96.2	70-130			
PFTrDA	282	39		371.06	U	76.1	70-130			QC-
PFUdA	325	39	(*)	371.06	U	17.7	70-110			

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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

## Semi Volatile Organics (SVOA) - Quality Control US-EPA, Region 4, SESD

Analyte	Rosult	Reporting Limit	Units	Spike Level	Source Result	%REC	*GREC	RPD	RPD Limit	Notes
Batch 1805038 - S PFC										
Matrix Spike Dup (1805038-MSD1)	Sot	rce: E181703-	10	Prepared: 0	5:09/18 A	nalyzed: 05	25/18			
ASB 100S										
42FTS	316	39	ng/L	353.50	U	19.3	70-150	2.31	20	
F2FT9	367	39		359.17	U.	102	70-130	12.5	20	
2FTW	376	39		362.93	U	103:	70-130	21.2	20	QN
FOSA	365	39		378.07	U	96.6	70-130	16.6	20	
REPO-DA	361	39		378.07	U.	95.5	20-130	1.45	20	
4-MeFOBAA	391	9.7		378 07	U	103	70-130	3.54	30	
FBA	368	39	1.50	378.07	18.2	92.4	70-130	0.162	20	
TBS	341	39		334.59	U	102	70-130	13.0	20	
FDA	411	39	0.00	378.07	U	109	70-130	8.67	20	
FDsA	370	39		378.67	U	97.7	70-130	3.38	20	
PFDS	369	39	100	364.84	t/	73.7	70-130	5.49	20	
THpA	395	39		378.07	20.3	99.2	70-130	5.88	20	
Wilph	341	39		359.17	U	95.0	70-130	2.02	20	
FHsA	433	39	2.000	378.07	65.7	97.0	70-130	6.62	20	
FHx8	129	39	1	344.80	TJ.	95.3	70-130	3.13	20	
FNA	339	39	0.00	378.07	U	89.7	70-130	9.71	20	
TNS	336	39		362.95	U	92.7	20-130	17.1	20	
PIOA.	383	10		378.07	U	102	70-130	7.95	20	
Fos	351	39	2.00	349.91	U.	100	70-130	11.8	20	
PFPeA	516	39		378.07	155	95.5	70-130	0.705	20	
PEPeS	338	9.7	100	355.39	U	95.2	20-130	1.18	20	
PFTrDA	418	39		378.07	D.	111	20-130	38.8	20	QC-
T HUS	-410	39		378.07	U.	1.11	30+130	30.0	20	QN
TUIA	378	39		378.07	U	100	70-130	15.0	20	
MRL Verification (1805038-PS1)				Prepared &	Analyzed	05/15/18				
ASB 100S				t telegram to	rannyean	40.40.40				
42FT8	20.9	40	ng/L	37.251		56.1	50-150			MRI.
12FTS	45.5	40		36.247		119	50-150			MRI
FOSA	30.1	40		39.841		75.6	50-150			SIRL
TO SA	(100)	40		707.841		13.0	30130			MRL-
HEPO-DA	46.1	40		39.841		116	50-150			MRI
N-MeFOSAA	32.7	40		39.841		82.0	50-150			
										MRL-
FBA	342	40	163	39.841		85.9	50-150			MRL-
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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

# Semi Volatile Organics (SVOA) - Quality Control US-EPA, Region 4, SESD

Analyte	Rondt	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1805038 - S PFC										
MRL Verification (1805038-PS1)				Prepared &	Analyzed:	05/15/18				
PFBS	36.6	40	ng.T.	35.259		104	50-150			1
										MRL-2
PFDA.	47.4	80	1.2	39.641		119	50-150			9
The same of the sa	200	,,,,				1995				MRL-2
										Q-
PFDsA	44.4	40		39.841		111	50-150			MRL-2
										QC-I
PFHpA	39.9	40	1.0	39.841		100	50-150			
										MRL-2
										Q
THpS	41.1	40		37.849		109	50-150			MRL
THXA	46.8	40		39:841		117	50-150			MRL
THE	35.2	45		36.335		96.7	50-150			numeri d
										MRL-3
PFNA	40.2	40	100	39.841		101	50-150			MRL
TINS	32.7	40		38.247		15.6	50-150			
3.150	1000			29.247		10000	September 1			MRL-2
										Q-
PFOA	40.4	40		39.841		101	50-150			MRL
PFOS	27.3	40		36.873		74.1	50-150			
										MRL-2
PFPeA	39.1	40		39.841		58.1	50-150			Q
rrrea	1207.6	.40.1		307.841		39.1	304130			MRL-2
										Q-
PFPeS	27.7	40		37.450		74.1	50-150			
										MBU2
PFUIA	42.0	40 1		39.841		105	50-150			MRL-
TOBA	42.0	40		20.041		1005	30-130			MUL.
MRL Verification (1805038-PS2)				Proposed &	Analyzed:	05/15/18				
ASB 100S				11spaces s	Tumo see	09-10-10				
62FTS	:116	160	ng/L	151.39		:76.5	50-150			- 2
575.7 SO	11140	.1959		100,000		13/10/00	100,000			MRL-2
										Q-
PFDS	84.4	160		153.7%		54.9	50-150			
										MRL-2 Q-2
										90
PFTrDA	163	160		159.36		102	50-150			MRL-2
										QC-1
										QC.
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Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 18-0142

Project: 18-0142, Phase 1 PFASs Chattooga River - Reported by Diana Burdette

### Notes and Definitions for QC Samples

ti -	The analyte was not detected at or above the reporting limit.
	The identification of the analyte is acceptable; the reported value is an estima
MRL-2	MRL verification for Non-Potable Water matrix
2-2	Result greater than MDL but less than MRL.
QC-1	Analyte concentration low in continuing calibration verification standard
QC-2	Analyte concentration high in continuing calibration verification standard
QC-5	Calibration check standard less than method control limits.
1-10	Laboratory Control Spike Recovery Jess than method control limits
QM-3	Matrix Spike Precision outside method control limits
28-3	Surrogate recovery is lower than established control limits.

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# 11.0 Field Logbook

United States Environmental Protection Agency
Region 4
Science and Ecosystem Support Division
980 College Station Road
Athens, Georgia 30605-2720



Project Name: Study of PFASs Compounds on the Chattooga River Project Location: Chattooga County GA, Cherokee and Etowah County AL Project ID: 18-0142 Project Leader: Derek Little

Sampling

Book of Inclusive Dates: 4/24/18 - 4/24/18

List of personnel:

Name	Initials	Duties	Organization
DEREK LITTLE	DL.	PROJECT LEADER	SESD
JERRY ACKERMAN	111	SAMPLER	SESD
NATE BARLET	NTB	SAMPLER	SESD
	- 1000000		
			_

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Initial and Date: 4/14/19 18-0142 Page 2 of 27

Initial and Date: D 4/14/18 Page intentionally blank H 3 18-0142 Page 3 of 27 7

Initial and Date: DC 4/24/8

Standard Operating Procedures to be used, unless otherwise stated.

Field Measurement Procedures	SESDPROC-	Revision
Field pH Measurement	100	R4
Field Specific Conductance Measurement	101	R6
Field Temperature Measurement	102	R5
Field Turbidity Measurement	103	R4
Field Measurement of Dissolved Oxygen	106	R4
Global Positioning System	110	R4
In-Situ Water Quality Monitoring	111	R3
Field Sampling Procedures	SESDPROC-	Revision
Surface Water Sampling	201	R4
Ecology Section Field Sampling Procedures	SESDPROC-	Revision
Hydrological Studies	501	R4
Divisional Quality Systems Documents	SESDPROC-	Revision
Logbooks	1002	RO
Quality System Procedures	SESDPROC-	Revision
Sample and Evidence Management	005	R3
Field Sampling Quality Control	011	R5

Field Equipment Used:

Equipment Description	Identification Number	
1. Smarthour	549609	
2. La Moffe	3489-2102	
3. GPs- 400t	5156769	
4. Nikon Coolpix	5 49549	
5.		
6.		
7.		

### Station information:

Station ID	Description	State	Longitude	Latitude
CI00	Weiss Lake	AL		
CR01	Coosa Sample	GA		
CR02	NEE-13, Coosa River	AL		
CT01	Canyon Road	AL		
CT02	Cherokee County 97	AL		
CT03	Holland/Chattoogaville	GA		
CT04	Lyerly Dam	GA		
CT05	USGS Station, GA-1	GA		
CT06 .	Martha Berry	GA		
CT07	Club Drive	GA		
CT08	Tate Rd	GA		
CT09	Shattuck Blvd	GA		
CT10	Villanow ST	GA		
GI00	Gadsden	AL		
OF01	Outfall 1	AL	_	
OF02	Power Outfall	AL		

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Station ID:	GIØØ	In Si	tu WQ
Sample Date:	4-24-18	Operator:	NTB
Sample Time:	1240	DO (mg/L):	8.60
	Sampling	pH:	6.97
Clean hands:	JWA	Temperature (C):	17.7
Dirty hands:	DMC	Sp. Cond. (μS/cm):	151
# Containers:	2	Turbidity (NTU):	10
	GPS		
Latitude:		Pho	to Log
Longitude:		Photographer:	DML
Operator:	DMC ± 18ft	Upstream Photo:	1163.
	Flow	Downstream Photo:	1164
Total Q:	NA		
Operator:	NA		
otes/Observatio ADEM colle EPX Sample	ction w/ Van dorn sa	mpler to level o	fintake.
ADEM cole	(** ) (** ** ) (**	mpler to level o	f intake

Station ID: Sample Date:	4-24-18	In Situ WQ Operator:	NTB
Sample Time:	1320	DO (mg/L):	8.9/
Sampling		pH:	7.67
Clean hands:	DMC	Temperature (C):	17,54
Dirty hands:	NTB	Sp. Cond. (μS/cm):	149.5
# Containers:	2	Turbidity (NTU):	13
GPS			
Latitude:		Photo Log	
Longitude:		Photographer:	DL
Operator:	_	Upstream Photo:	1165
Flow		Downstream Photo:	1166
Total Q:	NA		
Operator:	A A		
	from AD EM L	Sout	
		Sant	

Station ID:	OFOR	In Situ WQ	
Sample Date:	4-24-18	Operator:	JWA
Sample Time:	1415	DO (mg/L):	8.95
Sampling		pH:	7.86
Clean hands:	DML	Temperature (C):	17.76
Dirty hands:	NTB	Sp. Cond. (μS/cm):	151
# Containers:	2	Turbidity (NTU):	11
GPS			
Latitude:		Photo Log	
Longitude:		Photographer:	DL
Operator:	DML	Upstream Photo:	1167
Flow	1	Downstream Photo:	1168
Total Q:	NA		
Operator:	NA		
oses, observatio	ns/Urawings:		
Notes/Observatio	ns/urawings:		

Station ID:	OFOL	In Situ WQ	
Sample Date:	4-24-18	Operator:	JWA
Sample Time:	1440	DO (mg/L):	9.176
Sampling		pH:	9.76
Clean hands:	DML	Temperature (C):	18.5
Dirty hands:	NTB	Sp. Cond. (µS/cm):	150
# Containers:	2	Turbidity (NTU):	19
GPS			1,
Latitude:		Photo Log	
Longitude:		Photographer:	DHC
Operator:		Upstream Photo:	1169
Flow	1 4	Downstream Photo:	1170
Total Q:	NA		
Operator:	NA		
Notes/Observation	ons/Drawings:		
Notes/Observatio	ons/Drawings:		

Station ID:	CIOO	In Situ WQ	
Sample Date:	4/24/18	Operator:	JWA
Sample Time:	1515	DO (mg/L):	7.56
Sampling		pH:	3.14
Clean hands:	DL	Temperature (C):	123
Dirty hands:	NTB	Sp. Cond. (μS/cm):	155
# Containers:	2-	Turbidity (NTU):	7.8
GPS			
Latitude:		Photo Log	
Longitude:		Photographer:	PL
Operator:	PL	Upstream Photo:	Lake: 117
Flow		Downstream Photo:	NA
Total Q:	NA		
A TANK A A A A A A A	ons/Drawings: FBI collecti	ed @1570	
Notes/Observati		ed Q1570	

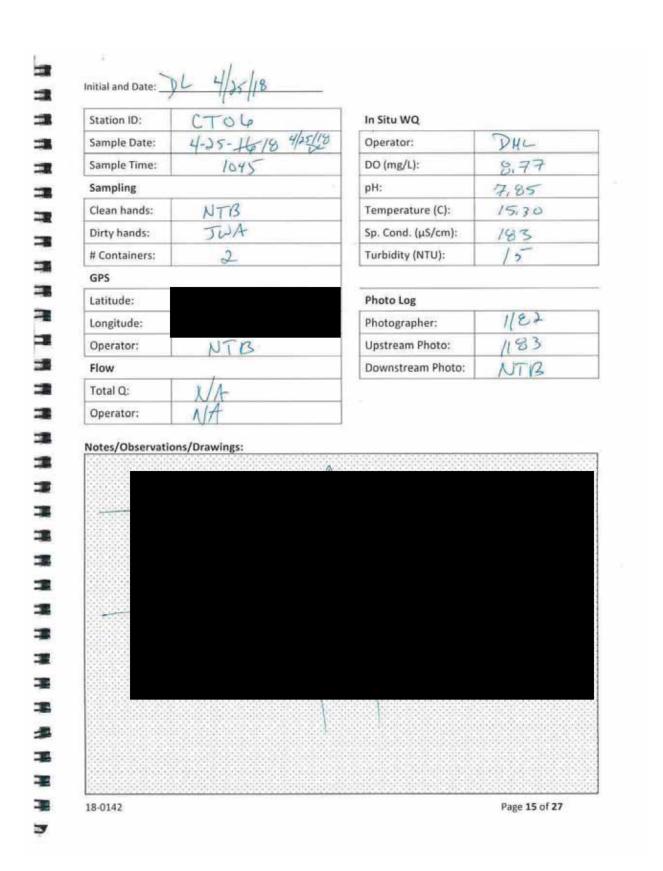
Station ID:	CTOL	In Situ WQ	
Sample Date:	4-24-18	Operator:	JWA
Sample Time:	1605	DO (mg/L):	. 8.62
Sampling		pH:	7.95
Clean hands:	NTO	Temperature (C):	15.8
Dirty hands:	JWA	Sp. Cond. (μS/cm):	131
# Containers:	2	Turbidity (NTU):	58.1
GPS			
Latitude:		Photo Log	
Longitude:		Photographer:	JWM
Operator:		Upstream Photo:	1172
Flow		Downstream Photo:	1173
Total Q:	1/4		
	/ \ / \		
Operator: Notes/Observation Stage 1	ons/Drawings:	as measurements	
Notes/Observation	ons/Drawings:	as measurements	

Station ID:	CTO2	In Situ WQ	
Sample Date:	4-24-18	Operator:	7/_
Sample Time:	1630	DO (mg/L):	DC. 8.97
Sampling	1000	pH;	7.84
Clean hands:	JWA	Temperature (C):	15.57
Dirty hands:	NTB	Sp. Cond. (µS/cm):	124.5
# Containers:	2	Turbidity (NTU):	70.1
GPS			
Latitude:		Photo Log	
Longitude:		Photographer:	NTB
Operator:	NTB	Upstream Photo:	NTB 1174 1175
Flow	/\	Downstream Photo:	1/75
Notes/Observation			
	ons/Drawings: Law high to was	te.	

Sample Time: 0530  Sampling  Clean hands: JWA  Dirty hands: NTB  # Containers: Turbidity (NTU): 3  GPS  Latitude: Photo Log  Photo Log  Photographer: Month of the properties	-11	03	5				In:	Situ WQ	1							
Sample Time: 0930  Sampling  Clean hands: JWA  Dirty hands: NTB  # Containers: D  GPS  Latitude: Doperator: NTB  Flow  Total Q: NA  Operator: NA  Notes/Observations/Drawings:  A  Cance launch  Runners possibly TREX material	4-0	25	-18				Ор	erator:			1	1	1	4		
Clean hands: JWA  Dirty hands: NTB  # Containers: D  Turbidity (NTU): 3  GPS  Latitude: Photo Log  Photographer: M  Upstream Photo: M  Total Q: WA  Operator: NA  Robertalions/Drawings:  Flow for high to masure safety  Cance launch  Runners possibly TREX material	_						DC	(mg/L):					.5			
Dirty hands: NTB # Containers: Described by TREX material  Sp. Cond. (\(\mu\)S/cm): // Turbidity (NTU): 3  Sp. Cond. (\(\mu\)S/cm): // Turbidity (NTU): 3  Photo Log Photographer: // Upstream Photo: // Upstream Photo: // Upstream Photo: // Downstream Photo: //  //  //  //  //  //  //  //  //  //							рН					7	7			
# Containers:  GPS  Latitude: Longitude: Operator: NTB  Flow  Total Q: Operator: NA  O	ナ	-W	4				Te	nperatu	re (C)	:		15	,7	2		
Departor:  Total Q:  Operator:  NA	N	TI	3				Sp	Cond. (	μS/cm	n):	ď	14	1			
Latitude:  Longitude:  Operator:  NTB  Flow  Total Q:  Operator:  NA  Operator:  NA  Notes/Observations/Drawings:  Flow for high to manus safely  Cance launch  Runner possibly TREX material	0	)_					Tu	bidity (I	NTU):			3	6			
Doperator:  NTB  Photographer:  Upstream Photo:  Downstream Photo:  H  Total Q:  Operator:  NA  Notes/Observations/Drawings:  Flow for high to measure safety  GA END observing  Cance launch  Runners possibly TREX material																
Operator: NTB  Flow  Total Q: NA  Operator: NA  Notes/Observations/Drawings:  Flow for high to measure safety  GA END observing / 1.  Cance launch  - Runners possibly TREX material							Ph	oto Log								
Total Q: NA Operator: NA Notes/Observations/Drawings:  Flow for high to measure safety  GA END observing / To  Cance launch - Runners possibly TREX material							Ph	otograp	her:			1	T	B		
Total Q: NA  Operator: NA  Notes/Observations/Drawings:  Flow for high to measure safety  GA EN observing / Ja  Cance launch - Runners possibly TREX material	1	NT	13				Up	stream	Photo			11	75			
Operator: NA  Notes/Observations/Drawings:  Flow for high to measure safety  GA END observing / Ja  Cance launch - Runners possibly TREX material							Do	wnstrea	m Pho	oto:		11	78	-	DL	
GA END observing / James Parish Cance Launch - Runners possibly TREX material	JA	A_										11	77	2	4	در
GA END observing / James Cance launch - Runners possibly TREX material	10	A														
	nc! 	h pos	si bl	Jing J	) Tre	/-) x	) <sub>e</sub>	y c								
													ge 1:			

Station ID: CTO4	In Situ WQ	
Sample Date: 4-25-18	Operator:	DL
Sample Time: 0 955	DO (mg/L):	9.01
Sampling	pH:	7.82
Clean hands: NTB	Temperature (C):	15.61
Dirty hands: JWA	Sp. Cond. (µS/cm):	149.4
# Containers:	Turbidity (NTU):	27
GPS		
Latitude:	Photo Log	
Longitude:	Photographer:	NTB
Operator: NTB	Upstream Photo:	1178
Flow	Downstream Photo:	1179
Total Q: NA		
0		
Operator: NA Notes/Observations/Drawings:  Flow too high to M	Necsure	
Notes/Observations/Drawings:		as Cro

Temperature (C): 15.48  Dirty hands: DWA  Frontainers: Q  Fron	Sample Time: /020 Sampling Clean hands: NTB Dirty hands: DWA # Containers: 2  GPS Latitude: Photo Log Photographer: NTB Dirty hands: NTB Dirty (NTU): 22  Flow Total Q: NA Dirty hands: NTB Downstream Photo: 18	Station ID:	CTO5	In Situ WQ	
Temperature (C): 15.48  Temperature (C): 15.48  Total Q: Do (mg/L): 9.34  Do (mg/L): 9.34  Temperature (C): 15.48  Sp. Cond. (µS/cm): 151.0  Turbidity (NTU): 2.2  Turbidity (NTU): 2.2  Photo Log  Photo Log  Photographer: NTB  Upstream Photo: 1/80  Downstream Photo: 1/80  Downstream Photo: 1/81	Temperature (C): 15.48  Temperature (C): 15.48  Sp. Cond. (µ5/cm): 151.0  Turbidity (NTU): 23  Sps  atitude: Operator: NTB  Do (mg/L): 9.34  Temperature (C): 15.48  Sp. Cond. (µ5/cm): 151.0  Turbidity (NTU): 23  Photo Log  Photographer: NTB  Upstream Photo: 1/80  Downstream Photo: 1/81  Downstream Photo: 1/81	ample Date:	4-25-18	Operator:	JUA
Sampling Clean hands: NTB Dirty hands: SDA Dirty hands: S	Sampling Clean hands: NTB Dirty hands: SDA Dirty hands: S	Sample Time:	and the same	DO (mg/L):	9.34
Temperature (C): 15.48  Dirty hands: JWA  # Containers: 2  # Containers: 2  Turbidity (NTU): 22  Photo Log  Photo Log  Photographer: WTB  Upstream Photo: 1/80  Downstream Photo: 1/80  Downstream Photo: 1/81  Iotes/Observations/Drawings:	Clean hands: N TB  Dirty hands: DW A  # Containers: 2  GPS  Latitude: Photo Log  Photo Log  Photographer: NTB  Flow  Total Q: NA  Operator: N A  Iotes/Observations/Drawings:	Sampling		pH:	
# Containers: 2  GPS  Latitude: Photo Log  Photographer: UTB  Upstream Photo: 1/80  Downstream Photo: 1/81  Total Q: NA  Iotes/Observations/Drawings:	# Containers: 2  GPS  Latitude: Photo Log  Photo Log  Photographer: UTB  Upstream Photo: 1180  Total Q: NA  Operator: NA  Iotes/Observations/Drawings:	Clean hands:	NTB	Temperature (C):	
GPS Latitude: Longitude: Operator: Flow Total Q: Operator: A Opera	A Coperator:  Cope	Dirty hands:	JWA	Sp. Cond. (μS/cm):	151.0
Coperator: NTB Upstream Photo: 1/80  Flow Downstream Photo: 1/81  Total Q: NA  Operator: NA  Iotes/Observations/Drawings:	Actitude:  Longitude:  Operator:  Flow  Total Q:  Operator:  A  Operator:  A  Operator:  A  Operator:  Operato	# Containers:	. 5	Turbidity (NTU):	22
Coperator: NTB Upstream Photo: 1/80  Flow Downstream Photo: 1/81  Total Q: NA  Operator: NA  Interpretations/Drawings:	Coperator: NTB Upstream Photo: 1/80 Flow Downstream Photo: 1/81  Total Q: NA Operator: NA Interest Observations/Drawings:	GPS			
Operator: NTB  Flow  Total Q: Downstream Photo:   18   Operator: NA  Iotes/Observations/Drawings:	Operator: NTB Upstream Photo: 1/80 Flow Downstream Photo: 1/81 Total Q: NA Operator: NA Iotes/Observations/Drawings:	Latitude:		Photo Log	7
Flow  Total Q:	Flow  Total Q:	Longitude:		Photographer:	NTB
Total Q:	Total Q: NA Operator: NA Iotes/Observations/Drawings:	Operator:	NTB	Upstream Photo:	1180
Operator: A A  Notes/Observations/Drawings:	Operator: A A  lotes/Observations/Drawings:	Flow		Downstream Photo:	1181
lotes/Observations/Drawings:	otes/Observations/Drawings:				The second second
		IN THE PROPERTY.	NA		
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		Operator:	ons/Drawings:		
	#	Operator:	ons/Drawings:	<b>*</b>	



station ID:	CTO7	In Situ WQ	
ample Date:	4-25-18	Operator:	DUL
ample Time:	1110	DO (mg/L):	9,24
iampling	1.107	pH:	8,07
Clean hands:	NTB	Temperature (C):	15,07
Dirty hands:	JWA	Sp. Cond. (μS/cm):	115.2
# Containers:	5	Turbidity (NTU):	15
GPS	ý:		
Latitude:		Photo Log	
Longitude:		Photographer:	NTB
Operator:	NTB	Upstream Photo:	1185
Flow		Downstream Photo:	1186
Total Q:	NA		
Operator:	NA		
Stage N 3	, too high fur 4,56087		

Station ID: CTO 8	In Situ WQ	
Sample Date: 4-25-18	Operator:	DML
Sample Time: 1/36	DO (mg/L):	9.07
Sampling	pH:	8.16
Clean hands: NTB	Temperature (C):	15.30
Dirty hands: TWA	Sp. Cond. (µS/cm):	126.8
# Containers:	Turbidity (NTU):	23
GPS		
Latitude:	Photo Log	
Longitude:	Photographer:	NTB
Operator: N173	Upstream Photo:	1187
Flow	Downstream Photo:	1188
Total Q: NA		
Operator: NA		

Station ID: CTO 9	In Situ WQ
Sample Date: 4- 25-18	Operator: TMC
Sample Time: /2 W	DO (mg/L): 8.85
Sampling	pH: 7.85
Clean hands: NT3	Temperature (C): 16,87
Dirty hands: JWA	Sp. Cond. (μS/cm): 17-1. 8
# Containers:	Turbidity (NTU): /5
GPS	1
Latitude:	Photo Log
Longitude:	Photographer: NT/3
Operator:	Upstream Photo: 189
Flow	Downstream Photo: //90
Total Q:	
Operator: NA	
	) 1205 /2 containes
Poison luy present	1205 /2 containes

Station ID:	CT/O	In Situ WQ	
Sample Date:	4-25-18	Operator:	DMC
Sample Time:	1215	DO (mg/L):	8,80
Sampling	11000	pH:	7,94
Clean hands:	NTB	Temperature (C):	15.53
Dirty hands:	JWX	Sp. Cond. (μS/cm):	230.8
# Containers:	2	Turbidity (NTU):	6.6
GPS			
Latitude:		Photo Log	
Longitude:		Photographer:	NTB
Operator:		Upstream Photo:	1171
Flow		Downstream Photo:	1192
Total Q:	NA		2501
Operator:	NA		
	ons/Drawings:		
	ns, Drawings.		

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Station ID:	In Situ WQ
Sample Date:	Operator:
Sample Time:	DO (mg/L):
Sampling	pH:
Clean hands:	Temperature (C):
Dirty hands:	Sp. Cond. (µS/cm):
# Containers:	Turbidity (NTU):
GPS	
Latitude:	Photo Log
Longitude:	Photographer:
Operator:	Upstream Photo:
Flow	Downstream Photo:
Total Q:	
Operator:	14/16/10
Notes/Observations/Drawings:	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Notes/Observations/Drawings:	

		Data :	sonde Calif	oration Form	A	
onde#: 549	1.09			Model: SMARTH	OLL	1
DATE/TIME	Begin 4/	20-18/1300	4-23-18/ 13/5	4-4-18 / 1900	1	-
		25-181 1315	4-24-181 1900	4/24/18/1440	1	1
CONDUCTIVITY 12,500 (µs/cm)	Pre-Cal	12886.1	12400.3	12485.9		
	Post-Cal	12506.2	12502.6	12504.5		
	End Check	12600.5	12485.9	12249		
THE THE	Pre-Cal	7.16	7.00	7.11		
pH7	Post-Cal	6.98	7.00	6.96		
	End Check	7.00	7.11	6.90		
	Pre-Cal	4.18	3.96	4.08		
pH 4	Post-Cal	4.00	4.00	4.00		
pna	End Check	3.96	4.08	4.01		
pH 10	Read Only	10,13	10.08	9.99		
(Read Only)	End Check	10.08	10.18	9.96		
BAROMETRIC	Begin	750	742	734		The state of the s
PRESSURE (mmHg)	End	742	736	740		1
TEMPERATURE	Begin	20.91 /21.1	21.68 / 21.8	19.45 1 19.9	1	1
Thermistor / NIST	End	1	19.451 19.9	21.7 / 21.6		
	Pre-Cal	8.94	8.58	8.83		-
	Post-Cal	8.83	8.60	448.90 8.90		
Dissolved Oxygen	Churt Value	8.81	8.50	8.10		-
(mg/L) (Compare to Chart)	End Check	8.59	8.83	8.69		
	Chart Value	8.50	8.90	8.67		
DISSOLVED OXYGEN %	Pre-Cal	101.2	99.9	99.2		
	Post-Cal	100.1	129 100.1	100.0		
	End Check	99.9	99.2	100.0		>
BATTERY (V-b-)	Begin	NA -				->
BATTERY (Volts)	End	NA -		7.1		
OWEN LEAD	Begin	DL	DL	DL Jost		
OPERATOR	End	DL	DL	200		

Standard	Manufacturer	Lot	Expiration	
	Myron L	121470CA	028MAR19	
Conductivity	Fisher	177238	10/2019	
pH 4	Fisher	177435	10/2019	
pH 7	Fisher	176507	9/2019	
pH 10	Amco	7987	2/2019	
1.0 NTU	Amco	800171	2/2019	
10.0 NTU	Amco	18023351	2/2019	
100.0 NTU NIST	Fisher	335	9/26/2018	

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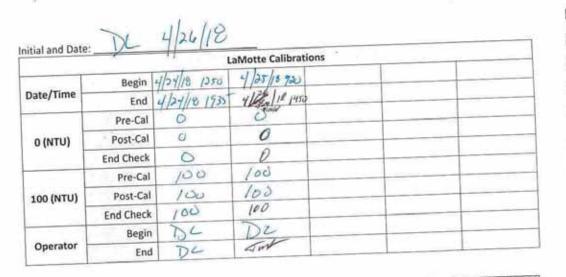
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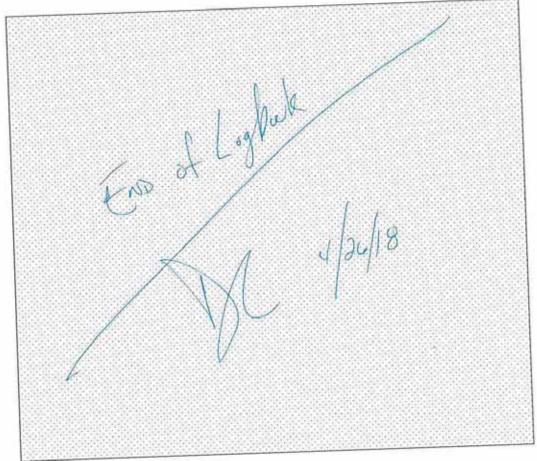
		Data	Sonde Calib	ration Forn	n	
Sonde#:				Model:		
DATE/TIME	Begin	420-18 / 1300	4-25-181 1345	1	1	1
	End	4-23-11 1345	1	1	1	1
	Pre-Cal	13038.1	12498.3			
CONDUCTIVITY 12,500 (us/cm)	Post-Cal	12497.4	12479.5			
12,500 (jasem)	End Check	12498.3				
pH 7	Pre-Cal	7.13	7.00			
	Post-Cal	7.02	6.98			
	End Check	7.00		-		
THE SECOND	Pre-Cal	4.14	3.98			
pH 4	Post-Cal	4.00	4.00			
	End Check	3.98				
pH 10	Read Only	10.05	10.13			
(Read Only)	End Check	10.05				
BAROMETRIC PRESSURE	Begin	750	742		THE RESERVE	(Single-Inc.)
(mmHg)	End	742	State of			
TEMPERATURE	Begin	20.90 / 21.1	21.68 /22.0	1	1	1
Thermistor / NIST	End	21.68 / 22.0	1	1	1	1
	Pre-Cal	8.85	8.50			
	Post-Cal	8.83	8.57			
Dissolved Oxygen (mg/L) (Compare to Chart)	Chart Value	8.81	8.58			
	End Check	8.53				
	Chart Value	8.50				
DISSOLVED OXYGEN %	Pre-Cal	100.3	99.8			
	Post-Cal	100.0	99.8			
	End Check	99.8	200			
BATTERY (Volts)	Begin	NA -				- 7
	End	NA -				->
OPERATOR	Begin	DL	DL			
	End	50				- 4

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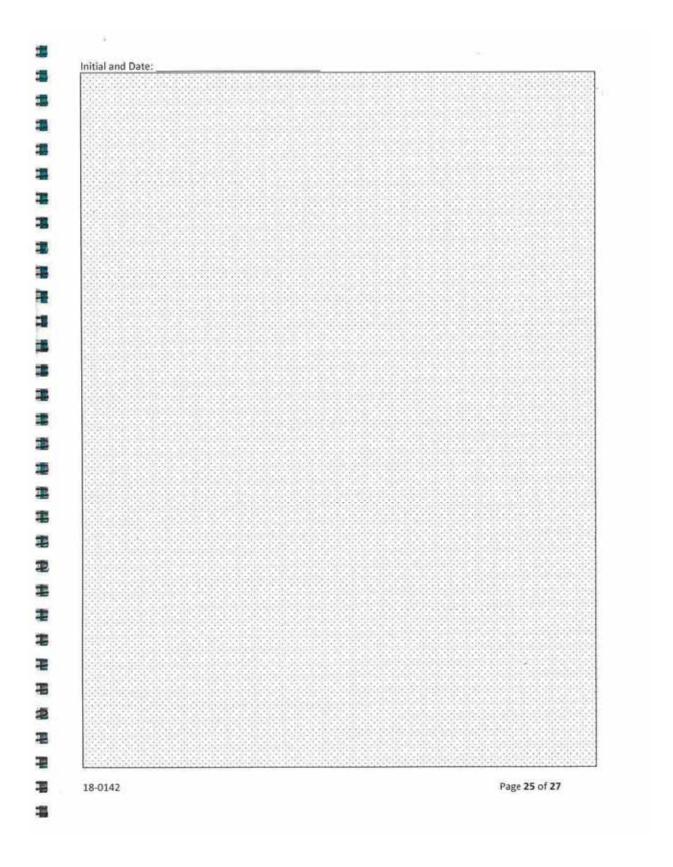
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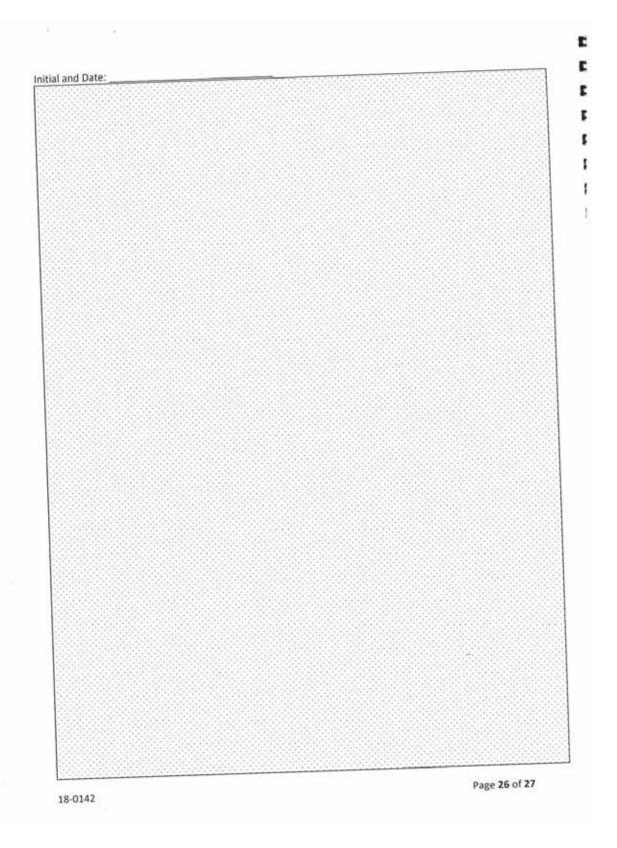
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